



INTERIM REPORT
ON

THE BIOLOGICAL SURVEY OF RIVER QUALITY

RESULTS OF THE

2002

INVESTIGATIONS

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PREFACE

Section 65 (3c) of the Environmental Protection Agency Act, 1992, requires the Environmental Protection Agency (EPA) to “*carry out, cause to be carried out, or arrange for such monitoring as it may consider necessary for the purposes of the programme*”. The “programme” referred to is the national environmental monitoring programme which the Agency is responsible for implementing or having implemented. In the present context the objectives of this programme are

- a) to establish the ongoing quality status of our rivers and streams
- b) to monitor quality changes and trends over time
- c) to assess the performance of pollution control and abatement measures
- d) to provide feedback to the responsible control agencies and
- e) to inform the general public

In relation to the “control agencies” mentioned above the responsibility for the licensing and regulation of large/complex industrial and other processes (including intensive agriculture) rests with EPA whereas the control and abatement of pollution from older and “non-scheduled” industry, from sewage and from agriculture remains the statutory responsibility of the local authorities.

The biological survey which is currently carried out by Agency biologists in Dublin, Kilkenny and Castlebar forms an essential element of the national monitoring programme. This survey was initiated by the then An Foras Forbartha (AFF) in 1971 when some 2,900km of channel on the larger rivers and their more important tributaries were biologically assessed for the first time. Since then the scope of the investigations has been steadily extended so that by 1990 virtually all of the rivers and streams depicted on the Ordnance Survey Map entitled "Rivers and their Catchment Basins" had been examined .

Although there are very many smaller streams which do not appear on this map, and which are not included in the survey, those which are shown are considered to form an acceptably representative national baseline.

The total number of rivers and streams in this baseline now stands at 1072; these are biologically surveyed at some 3,100 locations extending over 13,100 kilometres of channel. For logistical reasons just a third of this baseline can be surveyed in any year and thus the baseline takes three years to survey.

The survey is complemented by the physico-chemical measurements of river quality made by the Regional Water Laboratories at Castlebar, Kilkenny and Monaghan and those of the many local authority laboratories. Such chemical data are required to assess compliance with prescribed physico-chemical standards and for the precise identification and quantification of pollutants in waters.

This interim report continues the series issued by AFF from 1973 to 1986 and by the Environmental Research Unit (ERU) from 1989 to 1991.

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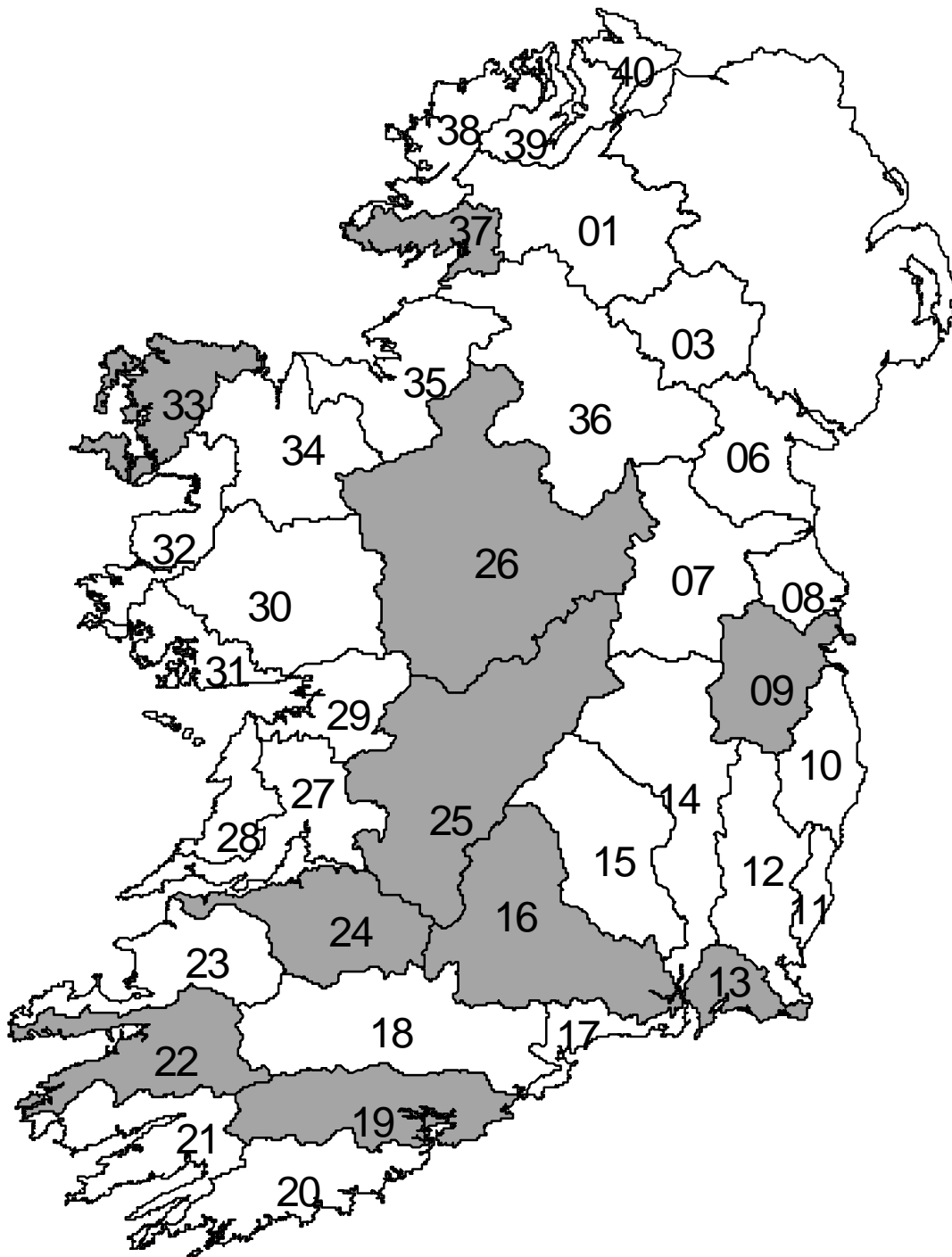


Fig. 1. Principal Hydrometric Areas surveyed in 2002.

INTRODUCTION

This report presents the results of the biological river quality investigations carried out in the year 2002 in which 964 locations on 327 rivers and streams were surveyed in those Hydrometric Areas indicated on the facing page (Fig. 1).

For each Hydrometric Area (HA) the total number of locations surveyed and the numbers and percentages falling into the four biological quality classes A, B, C and D is shown in Table 1 overleaf. A striking feature emerging from these figures is the very substantial reduction in the number of locations affected by serious pollution (Class D) i.e., from 25 instances in 1998-2000 to approximately half this figure in 2002 (13): the Liffey (HA 09) and Lower Shannon (HA 26) catchments stand out as most noteworthy in this regard. The number of locations affected by 'moderate' pollution (Class C) fell in areas 09, 13, 24, and 37 but increased in areas 16, 19, 22 and 26. Slight pollution (Class B - mostly eutrophication) receded in areas 09, 13 and 22 but increased in areas 16, 19, 17, 25, 26, 33 and 37. All levels of pollution were reduced in areas 09 and 13.

This table should not be regarded as nationally representative: it merely sets out the position in those hydrometric areas which were fully surveyed in 2002.

This is the second year in the current 3-year cycle of investigation (2001-2003) in which the national baseline of some 13,100 km of river channel is to be reassessed. All available biological and physico-chemical data acquired in the previous (1998-2000) cycle are set out and discussed in a two-part report published by the Environmental Protection Agency (EPA) in February 2001 (McGarrigle et al., 2001)

POLLUTION TYPES AND SOURCES

The commonest type of pollution - organic pollution - is caused by sewage, animal manure slurries and food processing wastes: as the waste is consumed by the organisms of decay the oxygen in the water is used up and the breakdown products (including phosphorus and nitrogen compounds) are released into the water. The main effects of organic pollution are therefore, the depletion of oxygen in the area immediately below the discharge and

eutrophication (i.e., enrichment) in the recovery zone further downstream. Eutrophication, which is also caused by the inappropriate and/or excessive application of organic (slurry) and inorganic (artificial) manure to agricultural and forestry lands, has become very widespread in recent years and in the period 1998- 2000 it was estimated that approximately one third of river channel length surveyed was affected to some degree. The characteristic symptom of eutrophication in rivers is abnormally luxuriant growths of water weed and filamentous algae which cause a variety of problems in affected waters.

Toxic pollution is commonly caused by poisons such as sheep dip, mining wastes and industrial discharges and its effects are recognisably different to those caused by organic wastes. Physical pollution refers to siltation arising from quarrying, bog and forestry development and arterial drainage.

Some wastes (e.g., sewage and manure slurries) commonly exert the three effects viz. organic, toxic and physical.

WATER QUALITY ASSESSMENT

As more fully discussed in Appendix I, water quality and water pollution assessment methods fall into two main categories - biological methods and chemical methods. Each approach has its own particular applications, strengths and weaknesses but ideally a combination of both is preferable to either on its own.

Biological Surveys: General

Biological surveys are usually undertaken in the summer-autumn period (June-September) when flows are likely to be relatively low and water temperatures highest. Surveys during this period are likely, therefore, to coincide with the worst conditions to be expected in those reaches affected by waste inputs. Material for examination is obtained by a 'kick' sampling technique in the faster-flowing areas of the river or stream (riffles) and the examination and assessment of water quality is made on site.

Interpretation of Terminology etc.

For a summary and explanation of the terminology employed in this report see Appendix I.

Table 1.

Analysis by Hydrometric Area (See Fig. 1) of the numbers of river locations surveyed in 2002 and also in the period 1998-2000 showing total numbers in the Biological Quality Classes:- A Unpolluted, B Slightly Polluted and/or eutrophic, C Moderately Polluted and/or Hypertrophic and D Seriously Polluted. Excludes locations not surveyed in both periods. Figures in italics are percentages.

Status in 1998-2000					Hydrometric Area No.	Status in 2002				
A	B	C	D	Total		A	B	C	D	Total
1	1	3	2	7	01 (Part)	2	0	3	2	7
<i>14.3</i>	<i>14.3</i>	<i>42.9</i>	<i>28.6</i>	<i>100</i>		<i>28.6</i>	<i>0.0</i>	<i>42.9</i>	<i>28.6</i>	<i>100</i>
26	16	24	7	73	09	38	9	23	3	73
<i>35.6</i>	<i>21.9</i>	<i>32.9</i>	<i>9.6</i>	<i>100</i>		<i>52.1</i>	<i>12.3</i>	<i>31.5</i>	<i>4.1</i>	<i>100</i>
11	7	3		21	13	16	4	1		21
<i>52.4</i>	<i>33.3</i>	<i>14.3</i>	<i>0.0</i>	<i>100</i>		<i>76.2</i>	<i>19.0</i>	<i>4.8</i>	<i>0.0</i>	<i>100</i>
78	19	19	3	119	16	70	22	27	0	119
<i>65.5</i>	<i>16.0</i>	<i>16.0</i>	<i>2.5</i>	<i>100.0</i>		<i>58.8</i>	<i>18.5</i>	<i>22.7</i>	<i>0.0</i>	<i>100</i>
56	8	3	0	67	19	53	10	4	0	67
<i>83.6</i>	<i>11.9</i>	<i>4.5</i>	<i>0.0</i>	<i>100</i>		<i>79.1</i>	<i>14.9</i>	<i>6.0</i>	<i>0.0</i>	<i>100</i>
24	6	2	0	32	22	24	4	4	0	32
<i>75.0</i>	<i>18.8</i>	<i>6.3</i>	<i>0.0</i>	<i>100</i>		<i>75.0</i>	<i>12.5</i>	<i>12.5</i>	<i>0.0</i>	<i>100</i>
10	0	0	0	10	23 (Balance)	10	0	0	0	10
<i>100.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>100</i>		<i>100.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>100</i>
21	16	30	2	69	24	22	17	28	2	69
<i>30.4</i>	<i>23.2</i>	<i>43.5</i>	<i>2.9</i>	<i>100</i>		<i>31.9</i>	<i>24.6</i>	<i>40.6</i>	<i>2.9</i>	<i>100</i>
99	52	44	2	197	25 (Part)	85	65	44	3	197
<i>50.3</i>	<i>26.4</i>	<i>22.3</i>	<i>1.0</i>	<i>100</i>		<i>43.1</i>	<i>33.0</i>	<i>22.3</i>	<i>1.5</i>	<i>100</i>
163	48	43	8	262	26	159	51	50	2	262
<i>62.2</i>	<i>18.3</i>	<i>16.4</i>	<i>3.1</i>	<i>100</i>		<i>60.7</i>	<i>19.5</i>	<i>19.1</i>	<i>0.8</i>	<i>100</i>
6	1	1	0	8	31 (Part)	5	3	0	0	8
<i>75.0</i>	<i>12.5</i>	<i>12.5</i>	<i>0.0</i>	<i>100</i>		<i>62.5</i>	<i>37.5</i>	<i>0.0</i>	<i>0.0</i>	<i>100</i>
33	1	4	0	38	33	28	6	4	0	38
<i>86.8</i>	<i>2.6</i>	<i>10.5</i>	<i>0.0</i>	<i>100</i>		<i>73.7</i>	<i>15.8</i>	<i>10.5</i>	<i>0.0</i>	<i>100</i>
6	5	1	0	12	34 (Balance)	8	2	2	0	12
<i>50.0</i>	<i>41.7</i>	<i>8.3</i>	<i>0.0</i>	<i>100</i>		<i>66.7</i>	<i>16.7</i>	<i>16.7</i>	<i>0.0</i>	<i>100</i>
42	2	4	1	49	37	41	6	1	1	49
<i>85.7</i>	<i>4.1</i>	<i>8.2</i>	<i>2.0</i>	<i>100</i>		<i>83.7</i>	<i>12.2</i>	<i>2.0</i>	<i>2.0</i>	<i>100</i>

THE PHOSPHORUS REGULATIONS

Government Regulations (S.I. No. 258 of 1998) intended to counter eutrophication have been introduced in recent years. In order to comply with the requirements of the Regulations and also with the Dangerous Substances in Water Directive (CEC 1976) phosphorus inputs to surface waters must be curtailed. The effectiveness or otherwise of measures designed to achieve this objective must be assessed and the Regulations allow for either chemical or biological assessment methods to be used. This approach is proposed because of the statistically robust cause-effect relationship which has been established between P concentrations and eutrophication status (McGarrigle *et. al.*, 1992).

As stated above, quality ratings of Q4 and higher represent satisfactory conditions where eutrophication is unlikely to be a problem. Because annual median P values in such waters rarely exceed 30 µg P/l this concentration has been adopted as the target value to be achieved by 2007. Because of the relationship between P values and eutrophication, progress towards achieving the specified targets may be assessed with reference to EPA biological surveys or by chemical analysis. Table 2 below summarises the requirements of Regulations. Only those rivers and streams biologically surveyed by EPA in the period 1995-1997 are covered by the Regulations: these are set out in the floppy disc which accompanies the National Water Quality Report for that period (Lucey *et. al.*, 1999).

TABLE 2. Phosphorus Standards Regulations target values for Irish Rivers

<i>If</i>	<i>Then</i>	
The current Q-Value ¹ falls into the category below:	<i>Either</i> The minimum Q-Value ¹ to be achieved is:	<i>Or</i> The annual median orthophosphate concentration ² (ugP/l) to be achieved is:
5	5	15
4-5	4-5	20
4	4	30
3-4	4	30
3	3-4	50
2-3	3-4	50
≤2	3	70

¹ Biological Quality Rating (Q-Value) as assessed by EPA staff during National River Monitoring Programmes.

² Molybdate-Reactive Phosphate (MRP) Median concentration to be determined as a minimum of 10 samples taken at intervals of four weeks or longer in any twelve consecutive month period. Where the requisite number of samples has not been taken within such period, the median concentration shall be determined from sampling conducted over such period, being a period not exceeding 24 months, as required to obtain a minimum of 15 samples taken at intervals of four weeks or longer.

Balance of
HYDROMETRIC AREA 01
Foyle

Most of the rivers in this area were surveyed in 2001.

# Carrigans	01C01
Deele (Donegal) (Part)	01D01
# St. Johnston*	01S01
Swilly Burn	01S03

*Indicates non-baseline rivers i.e., those which are not shown on Ordnance Survey of Ireland Map Rivers and their Catchment Basins.

Indicates rivers having seriously polluted stretches at the time of this survey.

River and Code : **CARRIGANS** **01/C/01**
 Tributary of : Null OS Catchment No: 61
 OS Grid Ref : C 370 112 Date(s) Surveyed : 07/08/2002

Sampling Stations Biological Quality Ratings (Q Values)
 No. Location **1994** **1997** **1998** **2002**

Greenhill Branch*

100 0 Br at Greenhill

Main Channel

0150	Bridge N. of Garshooey Lower	4	3-4	3	3
0200	Bridge at Carrigans	3	3	2-3	3

Assessment: The Carrigans was seriously polluted in the Greenhill Branch (0100). A pipe apparently discharging silage effluent was noted approximately 100m upstream of the bridge at this point. Moderate sewage fungus growths were noted downstream of the discharge. A separate sample taken upstream (0090) of this pipe was less severely polluted (Q2-3). The main channel of the Carrigans was moderately polluted at both sites examined (0150, 0200).

River and Code : **DEELE (DONEGAL) [Balance]** **01/D/01**
 Tributary of : Foyle OS Catchment No: 61
 OS Grid Ref : C 340 002 Date(s) Surveyed : 07/08/2002

Stations Biological Quality Ratings (Q Values)
 No. **1973** **1977** **1980** **1985** **1990** **1994** **1997** **1998** **2001** **2002**

0650	5	4	4	4	4	4	4	4	-	4
------	---	---	---	---	---	---	---	---	---	---

Sampling Station

No. Location
 0650 Bridge in Ballindrait

Assessment: The lower Deele (0650) was satisfactory where sampled in August 2002. Only one station was surveyed in completion of a partial survey in 2001.

River and Code : **ST JOHNSTON¹** **01/S/01**
Tributary of : Foyle OS Catchment No: 61
OS Grid Ref : C 351 097 Date(s) Surveyed : 07/08/2002

Stations No.	Biological Quality Ratings (Q Values)										
	1973	1977	1979	1981	1985	1988	1990	1994	1997	1998	2002
0280	-	-	-	-	2	2	1-2	3	2-3	1-2	2

Sampling Station
No. Location
0280 Second Bridge u/s Foyle River

Assessment: The St. Johnston River continues to be seriously polluted. A sewer discharges to the river just upstream of the bridge on the right hand side but sewage fungus coats the river bed for hundreds of metres upstream of the bridge. The main impact appears to be due to an agricultural effluent. The most likely cause is a silage effluent discharge. The profuse white coating of sewage fungus on the substratum requires a constant source of organic matter in order to maintain its biomass. This is one of the longest running example of a serious agricultural discharge to an Irish river.

River and Code : **SWILLY BURN** **01/S/03**
Tributary of : Foyle OS Catchment No: 61
OS Grid Ref : C 352 046 Date(s) Surveyed : 7/8/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)								
	1973	1977	1981	1985	1994	1997	1998	2002	
0100 Br NE of Tullyvinny	5	5	4-5	4	3	3-4	3-4	4	
0200 Br 1.5 km SE of Raphoe	3	3	3	2	2-3	3	2-3	3	

Assessment: An improvement in water quality was noted in the upper Swilly Burn (0100). The lower sample site was, however, moderately polluted.*

¹ Indicates a non-baseline river i.e., one which does not appear on the Ordnance Survey Map entitled "Rivers and their Catchment Basins".

HYDROMETRIC AREA 09
Liffey and Dublin Bay

Annalecka Brook	09A01
Ballinagee	09B08
Ballydonnell Brook	09B03
Ballylow Brook	09B04
Brittas	09B02
# Camac	09C02
Clonshanbo	09C03
Cock Brook	09C04
Dodder	09D01
Douglas	09D02
Glashaboy Brook	09G02
Kilcullen Stream	09K02
Kings	09K01
Lemonstown Stream	09L03
Liffey	09L01
Lyreen	09L02
Mayne	09M03
Morell ¹	09M01
Owenadoher	09O01
# Painestown ¹	09P01
Pinkeen	09P02
Rathmore Stream ¹	09R02
Rye Water	09R01
# Santry	09S01
Tolka	09T01

Currently having seriously polluted stretches.

¹ Indicates a non-baseline river i.e., one which does not appear on the Ordnance Survey Map entitled "Rivers and their Catchment Basins".

River and Code : **ANNALECKA BROOK** **09/A/01**
Tributary of : Kings (Liffey) OS Catchment No: 168
OS Grid Ref : O 053 015 Date(s) Surveyed : 27/03/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)		
	1996	1998	2002
0100 Annalecka Br	4-5	3-4	5

Assessment: Satisfactory and much improved since 1998.

River and Code : **BALLINAGEE** **09/B/08**
Tributary of : Kings (Liffey) OS Catchment No: 168
OS Grid Ref : O 032 020 Date(s) Surveyed : 08/05/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1988	1991	1996	1998	2002
0200 Ballinagee Br	5	4-5	4-5	4-5	5

Assessment: Water quality continued to be of the highest standard in this remote river. Formerly reported as the Kings River Station 0020.

River and Code : **BALLYDONNELL BROOK** **09/B/03**
Tributary of : Liffey OS Catchment No: 168
OS Grid Ref : O 059 139 Date(s) Surveyed : 08/05/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1983	1988	1991	1996	1998	2002
0100 Br u/s Ballylow Brook confl	5	5	5	4-5	4-5	5

Assessment: Highly satisfactory.

River and Code : **BALLYLOW BROOK** **09/B/04**
Tributary of : Ballydonnell Brook OS Catchment No: 168
OS Grid Ref : O 062 135 Date(s) Surveyed : 08/05/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)					
		1983	1988	1991	1996	1998	2002
0100	Br u/s Ballydonnell Brook confl	3-4	5	5	4-5	4-5	4-5

Assessment: Satisfactory. No change.

River and Code : **BRITTAS** **09/B/02**
Tributary of : Liffey OS Catchment No: 168
OS Grid Ref : O 025 160 Date(s) Surveyed : 09/05/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)					
		1983	1988	1991	1996	1998	2002
0100	Br NE of Talbotstown House	-	4-5	4	4	3-4*	4-5
0300	Br NNE of Moanaspick	-	4	3	4	4	4-5
0500	Kilbride Br	4	4	3	3-4	3-4*	4

Assessment: Despite heavy stream bed siltation, an improvement in biological diversity was recorded at the uppermost and lowermost locations (0100, 0500) where conditions were assessed as satisfactory as regards water quality in early May 2002.

River and Code : **CAMAC** **09/C/02**
Tributary of : Liffey OS Catchment No: 168
OS Grid Ref : N 137 343 Date(s) Surveyed : 30/04/2002

Stations No.	Biological Quality Ratings (Q Values)													
	1971	1974	1977	1981	1983	1984	1986	1988	1989	1991	1994	1996	1998	2002
0100	5	5	5	4-5	3	4-5	3	4	-	4	-	4	3	3-4
0200	3-4	3	3	3-4	3	3	2-3	2	2/0	2	2	2	2	-
0250	-	-	-	-	-	-	-	3	2/0	3	-	-	-	2-3
0300	1	-	1/0	1/0	3	3	1/0	-	-	-	-	-	-	-
0310	-	-	-	-	-	-	-	2-3	2-3	3	-	2-3	2-3	3
0400	-	-	-	1/0	2/0	1	3	2-3	1	2	1	1	3	-
0500	-	-	-	1/0	1	1	1	2	1	2/0	1/0	1-2	1-2	1

Sampling Station		Sampling Station	
No.	Location	No.	Location
0100	Br 1 km SW (u/s) of Saggart	0300	Just d/s Clondalkin Br
0200	Br N of Brownsbarn	0310	Riversdale Estate Br
0250	Br SE of Baldonnell Ho	0400	Kylemore Rd Br

Assessment:

Nowhere satisfactory. Slightly polluted upstream of Saggart (0100), moderately polluted downstream (0250, 0310) and seriously polluted in the Inchicore area in late April 2002. The river is no longer accessible at Kylemore Road Bridge (0400) or Brownsbarn (0200).

River and Code : **CLONSHANBO** **09/C/03**
Tributary of : Lyreen OS Catchment No: 168
OS Grid Ref : N 892 350 Date(s) Surveyed : 01/05/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)					
		1988	1991	1994	1996	1998	2002
0300	Br N of Baltracey X-Rds	3	2	3	2-3	3	3
0600	Br u/s Lyreen R confl	3	2-3	3	3	3	3

Assessment: This stream was again moderately polluted by suspected agriculture at both locations surveyed in early May 2002.

River and Code : **COCK BROOK** **09/C/04**
Tributary of : Blessington Reservoir OS Catchment No: 168
OS Grid Ref : O 019 089 Date(s) Surveyed : 08/05/2002

Sampling Stations		Biological Quality Ratings (Q Values)					
No.	Location	1983	1988	1991	1996	1998	2002
0100	Br NW of Kilmore	5	5	5	5	4-5	4-5

Assessment: Continuing satisfactory but silt-slime complexes may indicate some ecological stress at the point surveyed in early May 2002.

River and Code : **DODDER** **09/D/01**
Tributary of : Liffey OS Catchment No: 168
OS Grid Ref : O 178 343 Date(s) Surveyed : 15/05/2002

Stations		Biological Quality Ratings (Q Values)										
No.	1971	1973	1975	1977	1979	1981	1984	1988	1991	1996	1998	2002
0010	-	-	-	-	-	-	-	5	5	4	5	5
0100	-	-	5	4-5	5	5	5	-	4	4-5	4-5	4
0200	5	5	4	3-4	1/0	5	4-5	2	4-5	-	-	-
0300	3	3-4	1/0	2/0	3	3	3-4	4-5	3	4-5	4	3-4
0400	4	3-4	3-4	2-3	3	4	3-4	-	-	-	-	-
0420	-	-	-	-	-	-	-	4	-	4	4	-
0430	-	-	-	-	-	-	-	-	-	-	-	3
0500	4	3-4	3	3	2	4	3-4	-	3	-	-	-
0600	-	-	-	-	-	3	4	2-3	-	-	-	-
0620	-	-	-	-	-	-	-	-	3	3	3	3
0700	2-3	3	3-4	3	3-4	3	3	2-3	2-3	-	-	-
0800	3-4	2-3	3	3	3	2-3	2-3	2-3	3	3	3	3

Sampling Station		Sampling Station	
No.	Location	No.	Location
0010	1.3 km u/s Reservoir u/s distributary	0430	New Br u/s Templeogue Br
0100	U/s Piperstown Stream	0500	Templeogue Br
0200	Fort Br	0600	Springfield Crescent
0300	Old Bawn Br	0620	Br on Springfield Ave
0400	Footbridge, Firhouse	0700	Dodder Rd d/s Weir
0420	New Br, Firhouse	0800	Milltown Br

Assessment: Biological indicators pointed to satisfactory water quality in the upper reaches of the Dodder in May 2002 but excessive filamentous algal growths indicated a degree of eutrophication at Old Bawn (0300); local youths reported abattoir wastes accessing the river at this point. The absence of sensitive macroinvertebrate species from Templeogue to Milltown (0430 to 0800) indicated considerable pollution in the lower river at that time. Locals complain of sewage pollution from a storm overflow in the Dartry area.

River and Code : **DOUGLAS (LIFFEY)** **09/D/02**
 Tributary of : King's (Liffey) OS Catchment No: 168
 OS Grid Ref : N 979 033 Date(s) Surveyed : 08/05/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1988	1991	1996	1998	2002
0200 Granamore Br u/s King's R confl	4	4-5	4-5	4	4-5

Assessment: Continuing satisfactory.

River and Code : **GLASHABOY BROOK** **09/G/02**
 Tributary of : Annalecka Brook OS Catchment No: 168
 OS Grid Ref : O 066 017 Date(s) Surveyed : 27/03/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)		
	1996	1998	2002
0100 Glashaboy Br	4	3-4*	3/0

Assessment: The acid sensitive mayfly, *Baetis rhodani*, was not observed at the time of this investigation in late March 2002; this species had been a major component of the biota in 1996 and 1998 and its disappearance is most likely due to increasing acidification. Coniferous forestry plantations in the catchment are suspected as the most likely cause of the observed ecologic disruption.

River and Code : **KILCULLEN STREAM** **09/K/02**
 Tributary of : Liffey OS Catchment No: 168
 OS Grid Ref : N 842 095 Date(s) Surveyed : 10/05/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1984	1988	1994	1996	1998	2002
0800 Br E of Yellowbog	-	3	3-4	3	3*	4
1100 Br u/s Liffey R confl	5	3-4	3-4	3-4	3-4*	4

Assessment: Satisfactory and improved since 1988.

River and Code : **KING'S (LIFFEY)** **09/K/01**
Tributary of : Blessington Reservoir OS Catchment No: 168
OS Grid Ref : N 973 052 Date(s) Surveyed : 08/05/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)					
		1983	1988	1991	1996	1998	2002
0060	Br 100m u/s Ballinagee R confl	-	-	-	-	-	3-4
0100	Lockstown Br	5	5	4-5	4-5	4	4-5

Assessment: Considerable growths of filamentous algae and gelatinous slime plus an impoverished and unbalanced fauna indicated some ecological stress at the first point surveyed (0060) in May 2002. Forestry suspected. The lower reaches (0100) were satisfactory.

River and Code : **LEMONSTOWN STREAM** **09/L/03**
Tributary of : Liffey OS Catchment No: 168
OS Grid Ref : N 908 096 Date(s) Surveyed : 10/05/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)				
		1988	1991	1996	1998	2002
0100	Br E of Athgrean	5	4-5	4-5	4	5
0600	Br N of Ballybought (Main Channel)	4	4	3-4	3-4	4

Assessment: Following improvements this stream was in a satisfactory condition at both locations surveyed in May 2002.

River and Code : **LIFFEY**
 Tributary of : Sea - Dublin Bay
 OS Grid Ref : O 123 342

09/L/01
 OS Catchment No: 168
 Date(s) Surveyed : 24, 25, 25/06/2002

Stations No.	Biological Quality Ratings (Q Values)											
	1971	1974	1977	1978	1980	1981	1983	1988	1991	1995	1998	2002
0100	-	-	-	-	5	-	-	4	4-5	4-5	4-5	5
0200	-	-	-	-	5	-	5	4-5	4-5	4-5	4	5
0250	-	-	-	-	-	-	5	5	5	5	5	4
0400	5	5	-	3	4	-	2	4	4	2-3*	3-4	3-4*
0500	5	4-5	-	3	4	-	2	-	4	4	3-4*	4
0600	5	4-5	-	4-5	5	-	4-5	5	4-5	4	4-5	4-5
0700	-	5	-	4-5	5	-	5	4-5	4-5	4	4-5	4-5
0800	5	5	-	-	5	-	4-5	4-5	4-5	-	-	-
0850	-	-	-	-	-	-	-	-	-	4	4	4-5
0900	5	-	4-5	-	5	5	5	5	4	-	-	-
1000	2/0	-	4	-	3	3-4	3-4	4-5	4	4	4-5	4
1050	2/0	-	4-5	-	-	-	4-5	5	4	4	4	4
1100	3/0	3-4	4-5	-	5	4-5	4-5	4-5	4-5	-	-	-
1200	-	-	-	-	-	-	-	-	3-4	3-4	2	4
1400	3	-	3-4	-	3-4	4	4-5	4-5	3-4	3-4	3	-
1500	3-4	4	-	4	-	4	4-5	4-5	3-4	3	3-4	4
1600	4	4	-	3-4	-	4	4-5	4	3-4	3-4	3-4	4
1610	-	-	-	-	-	-	-	-	-	1	3-4	4
1700	4	4	-	3-4	-	4	4-5	4	3	3-4	3-4	4
1900	3	4	2-3	3	-	3	4	3-4	3-4	-	3	3-4*
2100	4	4	3	3	-	3	3-4	3-4	2-3	2-3	2-3	3
2327	-	-	-	-	-	-	-	-	-	-	-	3

Sampling Station No.	Location
0100	2km NW of Sally Gap
0200	Br E of Ballysmuttan
0250	0.5km d/s Ballyward Br
0400	Ballymore Eustace Br
0500	1km d/s Ballymore Br
0600	New Br u/s Kilcullen
0700	Kilcullen Br
0800	Athgarvan Br
0850	Connell Ford
0900	Br in Newbridge
1000	2.5 km d/s Newbridge 2327

Sampling Station No.	Location
1050	Victoria Br
1100	Caragh Br
1200	Castlekeely Ford (RHS)
1400	Millicent Br
1500	Alexandra Br, Clane (d/s side)
1600	Straffan, Turnings Lr (RHS & Mid)
1610	Straffan, Turnings Lr (LHS)
1700	Br in Celbridge
1900	Leixlip Br (RHS)
2100	Lucan Br
	Mill Lane Studio

Assessment: Following a major improvement at Castlekeely Ford below Osberstown (1200), indications were that the Liffey was in a satisfactory quality condition over most of its course in 2002. Suspected water treatment works effluent continued to depress quality slightly at Ballymore Eustace (0400) and Leixlip (0900) and suspected sewage discharges from Leixlip continued to pollute the lower river at Lucan (2100) and Mill Lane (2327) and presumably further downstream. *Siltation.

River and Code : **LYREEN** **09/L/02**
Tributary of : Rye Water OS Catchment No: 168
OS Grid Ref : N 942 388 Date(s) Surveyed : 01/05/2002

Stations No.	Biological Quality Ratings (Q Values)											
	1971	1973	1977	1981	1985	1987	1989	1991	1994	1996	1998	2002
0035	-	-	-	-	-	-	-	-	3	2-3	2-3	3
0100	1-2	2	1	2	1-2	3	3	2	2-3	2	2-3	2-3

Sampling Station
No. Location

0035 Br NE of Treadstown
0100 Just u/s Rye Water confl

Assessment: The Lyreen River was again moderately polluted by suspected agricultural and urban influences above and below Maynooth respectively in May 2002. Unsatisfactory. No change.

River and Code : **MAYNE** **09/M/03**
Tributary of : Sea - at Howth OS Catchment No: 165
OS Grid Ref : O 239 416 Date(s) Surveyed : 27/06/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1988	1991	1996	1998	2002
0500 Hole-in-the-Wall Rd Br	3	3	2-3	2/0	3

Assessment: Improved and no longer seriously polluted but not yet satisfactory. Luxuriant filamentous algal growths and the absence of sensitive macroinvertebrate species indicated moderate pollution in June 2002.

River and Code : **MORELL¹** **09/M/01**
 Tributary of : Liffey OS Catchment No: 168
 OS Grid Ref : N 926 921 Date(s) Surveyed : 29, 30/04/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1981	1982	1986	1988	1991	1998	2002
0060 (S) Br W of Tipper Ho	-	-	-	-	-	4	4
0100 Bridge in Johnstown	3	4	4	4	4	3	3
0150 Br NE of Sherlockstown	-	-	3	3	3	3*	3
0300 Br u/s Liffey R confl	5	4	4	4	3-4	4	4

Assessment: Although impacted by watering cattle in its upper and lower reaches, water quality was satisfactory at the points surveyed (0060, 0300) in April 2002. The middle reaches (0100, 0150) were unsatisfactory being heavily silted and lacking sensitive species.

River and Code : **OWENADOHER** **09/O/01**
 Tributary of : Dodder OS Catchment No: 168
 OS Grid Ref : O 141 292 Date(s) Surveyed : 27/06/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1988	1991	1996	1998	2002
1100 Br SW of Delamaine Cottage	5	4-5	4-5	4-5	4
1300 Scholarstown Road Br	4-5	4	4-5	3-4*	4
1700 Br u/s Dodder R confl	4	3/0	3	1/0	3-4

Assessment: This survey indicated that water quality was satisfactory in the upper and middle reaches of the Owenadoher River (1100, 1300) in late June 2002 but the lower reaches (1700) were slightly polluted at that time. Several thousand fish were reportedly killed by suspected industrial pollution in the Edmondstown area on the 18th of September 2002.

¹ River does not appear on OS Rivers Catchment Map; not a national baseline river

River and Code : **PAINESTOWN¹** **09/P/01**
 Tributary of : Morell OS Catchment No: 168
 OS Grid Ref : N 922 273 Date(s) Surveyed : 29/04/2002

Stations No.	Biological Quality Ratings (Q Values)									
	1981	1982	1984	1986	1988	1989	1990	1991	1998	2002
0300	-	3	3	3-4	3-4	-	-	3	3-4	1-2
0400	3	1	1	2	1	1-2	1-2	3	3-4	3-4
0470	-	-	-	-	-	-	-	-	-	4

Sampling Station
 No. Location

0300 Bridge in Kill Village
 0400 Painestown Br
 0470 Br 300m u/s Morell R confl

Assessment: The Painestown River was seriously polluted in Kill village (0300) in late April 2002, a major deterioration since 1998. Conditions then improved over the next five kilometres and the stream was restored to a satisfactory ('Fair' quality) condition by the time it reached the Morell river.

River and Code : **PINKEEN** **09/P/02**
 Tributary of : Tolka OS Catchment No: 167
 OS Grid Ref : O 053 410 Date(s) Surveyed : 26/06/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)		
	1996	1998	2002
0700 Br SE of Powerstown House	1	3	3

Assessment: Distinctly polluted and hypertrophic. No change.

¹ River does not appear on OS Rivers Catchment Map; not a national baseline river

River and Code : **RATHMORE STREAM¹** **09/R/02**
Tributary of : Morell OS Catchment No: 168
OS Grid Ref : N 916 220 Date(s) Surveyed : 29/04/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)						
		1980	1982	1986	1988	1991	1998	2002
0100	Bridge at Rathmore	4-5	4	4-5	4	3-4	4	4-5
0200	Bridge S.W. of Arthurstown	4-5	3-4	4	4	3-4	4-5	4
0300	Br N.E. of Johnstown	5	3-4	4	4	3-4	4	4-5

Assessment: Continuing satisfactory as regards biological quality despite a brown discharge at Station 0200 and very turbid waters downstream at Station 0300. Also known as the Hartwell Stream.

River and Code : **RYE WATER** **09/R/01**
Tributary of : Liffey OS Catchment No: 168
OS Grid Ref : O 006 359 Date(s) Surveyed : 01, 03/05/2002

Stations No.	Biological Quality Ratings (Q Values)													
	1971	1973	1975	1977	1979	1981	1983	1985	1988	1989	1991	1996	1998	2002
0100	4-5	4	3-4	3-4	3-4	3-4	3	3-4	3	-	3	3-4	3-4	4
0200	1-2	1-2	2	1	1	2-3	1/0	2-3	2/0	-	3/0	3-4	3*	3
0300	2	4	3	2-3	3	3-4	1	3-4	2-3	3	3-4	3-4	3	3-4
0400	2	3-4	1	1	2-3	3	1	2-3	2	2-3	3	3	3	3
0500	3-4	4	3	3	3-4	4	3	4	3-4	-	3-4	3	3	3-4
0600	4	4	3-4	3-4	4	4	3-4	-	3-4	-	3-4	3	3	3

Sampling Station		Sampling Station	
No.	Location	No.	Location
0100	Balfeaghan Br	0400	Kildare Br
0200	500 m d/s Kilcock Br	0500	Sandford's Br
0300	Anne's Br	0600	Br in Leixlip

Assessment: With the exception of the uppermost reaches (0100) where water quality was assessed as 'Fair', the Rye Water was slightly or moderately polluted at the other points surveyed in early May 2002. No major changes recorded.

¹ River does not appear on OS Rivers Catchment Map; not a national baseline river.

River and Code : **SANTRY** **09/S/01**
Tributary of : Sea - at Dollymount OS Catchment No: 166
OS Grid Ref : O 203 376 Date(s) Surveyed : 27/06/2002

No.	Location	Biological Quality Ratings (Q Values)							
		1988	1989	1990	1991	1994	1996	1998	2002
0300	Clonsaugh Rd Br	1	1	1	2/0	1/0	2	1-2	2
1100	Bettyglen off Watermill Rd	1	1	1	2-3	1-2	2-3/0	2/0	-

Assessment: This small urban stream was again seriously polluted in its shallow upper reaches (0300) and it was inaccessible downstream at Bettyglen (1100) at the time of this survey in late June 2002.

River and Code : **TOLKA** **09/T/01**
Tributary of : Sea - Dublin Bay OS Catchment No: 167
OS Grid Ref : O 176 358 Date(s) Surveyed : 26/06/2002

No.	Biological Quality Ratings (Q Values)													
	1971	1973	1975	1977	1979	1981	1983	1985	1988	1991	1994	1996	1998	2002
0300	-	-	-	-	-	3-4	-	3	3	3	3	2	3	3
0495														
0500	2	2	1-2	3	-	2-3	-	-	2	-	2	2	2	2-3
0600	4-5	4	3-4	3-4	3-4	3-4	3-4	3-4	2	2-3	3	3	3	3-4
0800	1	2	2-3	3-4	3	3	3	2	2	2-3	3	2-3	3	3
1000	4	4	2-3	3	2-3	2-3	2-3	2-3	2-3	2-3	-	3	2-3	2-3
1100	1	1	1/0	1	1	3/0	1/0	2	1-2	1/0	2-3/0	3	2-3	2-3

No.	Location	No.	Location
0300	Br at Black Bull	0800	Mulhuddart Br
0495	Br u/s Rusk Br (Main Rd)	1000	Dunsink Lane Br (Abbotstown Br)
0500	Rusk Br	1100	Violet Hill Drive Finglas
0600	Dunboyne Rd Br u/s Clonee		

Assessment: Unusually wet weather in May and June undoubtedly contributed to the slightly better condition of the Tolka River in and below Dunboyne (0500, 0600) in late June 2002 but nevertheless quality was nowhere satisfactory and no improvement was apparent in the distinctly polluted lower reaches from Mulhuddart (0800) to Finglas (1100).

HYDROMETRIC AREA 13

Ballyteigue-Bannow

Battlestown	13B04
Bridgetown (Wexford)	13B01
Cleristown	13C04
Corock	13C01
Duncormick	12D01
Mulmontry	13M01
Owenduff (Wexford)	13O01
Tintern Abbey Stream	13T01

River and Code : **BATTLESTOWN STREAM** **13/B/04**
Tributary of : Sea - Bannow Bay OS Catchment No: J2
OS Grid Ref : S 784 066 Date(s) Surveyed : 15/082002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)			
	1993	1996	1998	2002
0500 Br NE of Ballygow	3	3	4	4

Assessment: Again satisfactory. Previously (1993 and 1996) moderately polluted by farmyard slurry.

River and Code : **BRIDGETOWN (WEXFORD)** **13/B/01**
Tributary of : Sea - at Ballyteige Bay OS Catchment No: 179
OS Grid Ref : S 924 084 Date(s) Surveyed : 16/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1991	1996	1998	2002
0020 Gainstown Br	4	4	2-3	3-4	3-4
0080 Br E of Common	-	-	3-4	3-4	4

Assessment: Continuing slightly polluted in upper reaches, from suspected diffuse agriculture sources, but improved, since previous examination, in lower freshwater reach where satisfactory.

River and Code : **CLERISTOWN STREAM** **13/C/04**
Tributary of : Bridgetown OS Catchment No: 179
OS Grid Ref : S 974 095 Date(s) Surveyed : 16/08/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)			
	1993	1996	1998	2002
0200 Brownstown Br	3	4	3-4	4
0400 Br u/s Bridgetown R confl	4	3	3-4	4

Assessment: Satisfactory following improvement at both locations since previous survey.

River and Code : **COROCK** **13/C/01**
Tributary of : Sea - at Bannow Bay OS Catchment No: 180
OS Grid Ref : S 848 133 Date(s) Surveyed : 15/08/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)				
		1987	1991	1996	1998	2002
0020	Aughaloe Br	4	4	3	3-4	3-4
0080	Cullenstown Br	4-5	4-5	4	4	4
0100	Br E of Foulkesmills	4	3-4	4	4	4
0150	SSW of Coolcliffe Ho	4	4	4	4	4

Assessment: Satisfactory apart from uppermost location (0020) where again slightly polluted due to suspected diffuse agricultural sources.

River and Code : **DUNCORMICK** **13/D/01**
Tributary of : Sea - at Ballyteige Bay OS Catchment No: 179
OS Grid Ref : S 918 093 Date(s) Surveyed : 15/08/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)							
		1981	1985	1987	1991	1994	1996	1998	2002
0200	Br NE of Ballynagale Ho	3	3-4	3-4	2	3	2-3	2-3	2-3
0280	Tullycanna Br	-	-	2-3	3	-	3-4	3	4
0350	(W) Br nr Duncormick Rly St	-	-	3-4	3-4	-	4	3-4	3-4

Assessment: Two of the three locations examined continue to be unsatisfactory: downstream of Taghmon (0200) and upstream of Duncormick (0350) where domestic sewage was suspected as main causation in the former and as contributing in the latter. Significantly improved at the other location, Tullycanna Bridge (0280), since previous examination.

River and Code	: MULMONTRY	13/M/01
Tributary of	: Corock	OS Catchment No: 180
OS Grid Ref	: S 864 174	Date(s) Surveyed : 14/08/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)				
		1987	1991	1996	1998	2002
0300	Brownscastle Br	4	4	3-4	3-4	4
0500	Tottenhamgreen Br	4	4-5	4	4	4
0700	Goff's Br	4-5	4	4-5	4	4

Assessment: Following improvement, since previous survey, at the first of the locations examined all three were satisfactory in August 2002.

River and Code	: OWENDUFF (WEXFORD)	13/O/01
Tributary of	: Sea - Bannow Bay	OS Catchment No: 181
OS Grid Ref	: S 848 133	Date(s) Surveyed : 13/08/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)				
		1987	1991	1996	1998	2002
East Branch						
0020	Ballynabola Br (Old)	4	4	3-4	4	3-4
West Branch						
0050	Br near Carnagh Ho	3-4	4	4	4	4
Main Channel						
0060	Rathnageeragh Br	3	4	4	4	4
0180	Mullinderry Br	4	4	3-4	4	4
0240	Taylorstown Br	4-5	4	4	4	4

Assessment: Continuing satisfactory at all locations on the Main Channel and at the single one on the West Branch in August 2002. Deterioration, however, to slight pollution at the location on the East Branch Ballynabola Br (0020), where increases in sand deposition and algal growth were recorded since the previous survey.

River and Code : **TINTERN ABBEY STREAM** **13/T/01**
Tributary of : Sea - at Bannow Bay OS Catchment No: j2
OS Grid Ref : S 794 100 Date(s) Surveyed : 15/08/2002

Sampling Stations		Biological Quality Ratings (Q Values)				
No.	Location	1987	1991	1996	1998	2002
0900	Br at Tintern Abbey	4-5	3	3	3	4

Assessment: Significant improvement at the only location examined, Bridge at Tintern Abbey, where satisfactory for only the second time since surveys began in 1987.

HYDROMETRIC AREA 16

Suir

Aherlow	16A01
Anner	16A02
[Ara]	[16A03]
Arglo	16A04
[Aughnaglanny]	[16A05]
Ballintemple Stream	16B07
Black Stream (Cashel) ¹	16B05
Black (Twomileborris)	16B01
Blackwater (Kilmacow)	16B02
[Borrisoleigh Stream]	[16B06]
Burncourt	16B04
Clashawley	16C01
Clodiagh (Portlaw)	16C03
[Clodiagh (Tipperary)]	[16C02]
Clonmore Stream	16C11
Clover	16C04
Drish	16D02
Duag	16D03
[Farneybridge]	[16F02]
[Fidaghta]	[16F01]
[Fishmoyne]	[16F03]
[Glasha]	[16G01]
Glenboy	16G03
Glengalla	16G05
[Halfway House Stream]	[16H02]
Lingaun	16L01
Moyle	16M01
[Multeen]	[16M02]
Nier	16N01
Outeragh Stream	16O01
[Owenbeg (Tipperary)]	[16O02]
Pollanassa	16P02
Rossadrehid Stream	16R06
Rossestown	16R01
Shanbally	16S01
Smartscastle Stream	16S07
Suir	16S02
Tar	16T01
Thonoge	16T02

Due to time constraints the rivers shown in square brackets could not be surveyed in 2002; they will be surveyed in 2003.

¹ The Black Stream (Cashel) is not a baseline river: it is not shown on the OS Rivers Catchment Map.

River and Code : **AHERLOW**

16/A/01

Tributary of : Suir

OS Catchment No: 182

OS Grid Ref : S 035 280

Date(s) Surveyed : 26/09/02

Station No.	Biological Quality Ratings (Q Values)										
	1971	1974	1976	1977	1980	1985	1988	1993	1996	1999	2002
0040	-	-	-	-	-	-	-	4	4	4	4
0080	-	-	-	-	-	-	-	-	4-5	4	3-4
0100	-	-	-	-	4	4	4	4	-	-	-
0200	-	-	4	-	4	4	3	4	4	4	3
0300	-	-	-	-	4	4	3-4	4	4	4	4
0400	-	-	5	-	5	5	4	4	-	-	-
0500	-	-	-	-	5	5	4-5	4-5	4	4	4
0600	-	-	-	-	4	4-5	4	4	4	4	3-4
0700	-	-	4-5	-	4	5	4	4-5	4	4	4
0800	-	-	5	-	4	4	4	4-5	4	4-5	4
0900	4	4	4-5	4	4	4-5	4-5	4	4	4	4

Sampling Station

No.	Location
0040	Ballymahony Br
0080	Br SW of Keeloges
0100	Br SW of Ardrahin
0200	Galbally Br
0300	Stagdale Br
0400	New Br

Sampling Station

No.	Location
0500	Second Ford d/s New Br
0600	Br 2 km SW of Foxfort
0700	Br S of Ashgrove Ho
0800	Cappa Old Br
0900	Killardry Br

Assessment: Mostly satisfactory but with deterioration, since previous examination, at three of the nine sampling locations. Large crops of filamentous algae were recorded at Bridge SW of Keeloges (0080) in the upper reaches and at Galbally Bridge (0200) in the middle reaches due respectively to suspected agricultural and municipal sewage discharges. Further downstream, at Bridge 2 km SW of Foxfort (0600), the river was turbid at the time of sampling and the fauna indicated slightly polluted conditions. Populations of the protected pearl mussel still survive in the river but in very low numbers due to the enriched conditions.

River and Code : **ANNER**
 Tributary of : Suir
 OS Grid Ref : S 245 238

16/A/02
 OS Catchment No: 182
 Date(s) Surveyed : 02/08/02

Station No.	Biological Quality Ratings (Q Values)											
	1976	1977	1978	1980	1982	1985	1987	1988	1992	1996	1999	2002
Main Channel												
0100	-	-	1	2	1	1	1	3	3	3	2	3
0200	-	-	-	1	-	1-2	1	3-4	-	-	-	-
0300	-	-	3	2	3	2	2	3	-	-	-	-
0340	-	-	-	-	-	-	-	3	3	3	3-4	3
0600	-	-	3-4	3-4	3-4	4	-	3-4	3-4	4	4	3-4
0700	-	3-4	4	3-4	3-4	4	-	3-4	4	4	4	4
0800	-	-	3-4	3	4	4	-	4	4	4	4	4
0900	-	4	3-4	4	3-4	-	-	4	4	4	4	4
1000	-	-	5	5	4-5	-	-	4-5	4	4	-	-
1100	5	-	3-4	4	4-5	-	-	4	4	4	4	4
Mullinahone Branch*												
0400	-	-	3	3	3	2-3	3	2	2-3	-	-	-
0500	-	1	1-2	2	3	2	2	2-3	2-3	3	3	2-3

Sampling Station
 No. Location

Main Channel

0100 Br just N of Drangan
 0200 Br 1.3 km d/s Drangan
 0300 Br SW of Ballinacloghy
 0340 Br d/s Mullinahone Branch

Mullinahone Branch*

0400 Br in Mullinahone
 0500 Beeverstown Mill

Sampling Station
 No. Location

Main Channel

0600 Drummon Br
 0700 Melbourne Br
 0800 Br SW of Killusty Castle
 0900 Thorny Br
 1000 Br (Ford) W of Ballynevin
 1100 Br nr Anner Ho

Assessment: Some improvement at Drangan (0100) where seriously polluted, by sewage, in 1999. Moderately and slightly polluted, respectively, at the next two locations (0340 and 0600) representing deterioration at both. Continuing satisfactory from Melbourne Bridge downstream on the main channel. The location on the Mullinahone Branch (0500) was again moderately polluted.

River and Code : **ARGLO** **16/A/04**
Tributary of : Suir OS Catchment No: 182
OS Grid Ref : S 047 435 Date(s) Surveyed : 30/08/02

No.	Location	Biological Quality Ratings (Q Values)							
		1976	1980	1985	1988	1992	1996	1999	2002
0100	Br nr Grangebeg Ho	-	3-4	3-4	4	4	3-4	4	3-4
0200	Arglo Br	4-5	4	3-4	4	4	4	4	3-4

Assessment: Deterioration at both locations where filamentous algal growths, at the end of August, indicated their enriched status.

River and Code : **BALLINTEMPLE STREAM** **16/B/07**
Tributary of : Clashawley OS Catchment No: 182
OS Grid Ref : S 188 372 Date(s) Surveyed : 30/08/02

No.	Location	Biological Quality Ratings (Q Values)				
		1994	1996	1999	2002	
0800	Br N of Coolmoyn Crossroads		4	4	4	4

Assessment: Continuing satisfactory.

River and Code : **BLACK (TWO MILE BORRIS)** **16/B/01**
Tributary of : Drish OS Catchment No: 182
OS Grid Ref : S 192 592 Date(s) Surveyed : 27/08/02

No.	Location	Biological Quality Ratings (Q Values)							
		1980	1982	1985	1988	1992	1996	1999	2002
0030	Black River Br	-	-	-	-	-	3-4	3-4	3
0090	Br W of Newhill Ho	-	-	-	4	4	4	3-4	3
0100	Br W of Twomileborris	3	3-4	3	4	4	4	4	4

Assessment: Continuing satisfactory at the lowermost location sampled. Further deterioration, however, at the two upstream locations, since the previous examination, with the uppermost of these more overgrown and resembling a bog drain. Yet these two locations supported breeding populations of the protected crayfish (*Austropotamobius pallipes*).

River and Code : **BLACK STREAM (CASHEL)¹** **16/B/05**
 Tributary of : Suir OS Catchment No: 182
 OS Grid Ref : S 038 408 Date(s) Surveyed : 30/08/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)									
	1978	1980	1985	1986	1988	1989	1993	1999	2002	
0100 Br 0.5 km u/s Suir R confl	1-2	2	2	3	2	2-3	3	2-3	2-3	

Assessment: Continuing unsatisfactory, with moderately polluted conditions, at the only location examined. This stream was seriously polluted in the past when in receipt of sewage discharges from Cashel.

River and Code : **BLACKWATER (KILMACOW)** **16/B/02**
 Tributary of : Suir OS Catchment No: 182
 OS Grid Ref : S 586 141 Date(s) Surveyed : 26/07/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)								
	1976	1981	1985	1988	1992	1996	1999	2002	
0060 Br d/s Derrylackey R confl	-	-	-	4	4	4	4	3	
0080 Br to W of Mullinavat	-	-	-	4	4	4	4	4	
0200 Nr Clonassy Wood (Scart)	-	4	4	4	4-5	4-5	4	4	
0300 Dangan Br	4	5	3-4	3	3-4	4	4	4	
0400 Foot-bridge at Kilmacow	-	5	4-5	4	4	-	-	-	
0450 Br SE of Kilmacow	-	-	-	4	4	4	3-4	4	

Assessment: Mostly satisfactory but significant loss of quality, to moderate pollution, at first location (0060) which is downstream of the Lukeswell area, where slime growths, apparently promoted by sewage effluent, were recorded. Improved since previous survey at final location (0450).

¹ River does not appear on OS Rivers Catchment Map; not a national baseline river.

River and Code	: BURNCOURT	16/B/04
Tributary of	: Shanbally	OS Catchment No: 182
OS Grid Ref	: R 974 177	Date(s) Surveyed : 26/06/02

No.	Location	Biological Quality Ratings (Q Values)				
		1988	1992	1996	1999	2002
0100	Glengarra Br	4-5	4-5	5	4-5	4
0300	Burncourt Old Br	4-5	4-5	4-5	4	4-5

Assessment: Continuing satisfactory at both location despite further slight loss in ecological quality at the first of these (0100).

River and Code	: CLASHAWLEY	16/C/01
Tributary of	: Anner	OS Catchment No: 182
OS Grid Ref	: S 246 303	Date(s) Surveyed : 31/07/02

No.	Stations					Biological Quality Ratings (Q Values)				
	1976	1978	1980	1981	1983	1988	1992	1996	1999	2002
Main Channel										
0050	-	-	-	-	-	4	4	3-4	4	4
0080	-	-	-	-	-	4	4	4	3-4	3
0400	4	4-5	-	4	4	3-4	4	4	4	4
0470	-	-	-	-	-	2-3	3	3	2-3	2-3
0500	2	1	3-4	4	4	4	3-4	-	-	-
0600	-	4-5	-	5	4	4	4	4	4	4

Killenaule Branch										
0100	-	3	2	2-3	3	3	2-3	3	2-3	2-3
0200	-	4-5	-	4-5	4	4-5	4	3-4	4	4
0300	-	3-4	-	5	4-5	4	4	3-4	4	3-4

Sampling Station		Sampling Station	
No.	Location	No.	Location
Main Channel			
0050	Br SW of Cathaganstown	0100	Br 1 km S of Killenaule
0080	Br at Farranaleen Sta	0200	Br nr St Johnston Castle
0400	Br at Ballybough	0300	Saucestown Bridge
0470	1 km d/s Killenaule Branch	0600	Loughcapple Br
0500	Br 2 km SE of Fethard		

Assessment: Deterioration since previous survey at one location on each of Main Channel (0080) and Branch (0300) with the result that unsatisfactory overall in the latter.

River and Code : **CLODIAGH (PORTLAW)** **16/C/03**
Tributary of : Suir OS Catchment No: 182
OS Grid Ref : S 487 156 Date(s) Surveyed : 03/07/02

Stations No.	Biological Quality Ratings (Q Values)											
	1971	1975	1978	1980	1982	1984	1986	1988	1993	1996	1999	2002
0040	-	-	-	-	-	-	-	4	4	4	4-5	4
0100	-	-	5	-	-	-	4-5	4-5	3	3-4	4-5	4
0200	-	-	5	-	-	-	4-5	4-5	4-5	4-5	4	4-5
0300	5	5	5	-	-	5	4-5	4	4	3-4	3	3
0350	-	-	-	-	-	-	-	4-5	4-5	-	-	-
0400	-	5	5	-	-	5	3-4	4-5	4-5	4-5	3-4	4
0500	5	5	5	5	-	5	4	4	4	-	-	-
0600	1	1/0	1/0	1/0	1/0	1	2-3	2-3	3	-	-	-
0700	-	2-3	4-5	3	3-4	3-4	4-5	4	4-5	-	-	-
0750	-	-	-	-	-	-	-	-	-	4-5	4	4-5

Sampling Station		Sampling Station	
No.	Location	No.	Location
0040	Br NE of Ballycullane	0400	Lowry's Br
0100	Br E of Shanakill Ho	0500	2.5 km u/s Portlaw
0200	Br W of Munsburrow	0600	Portlaw Br (LHS)
0030	Clonea Br	0700	Portlaw Br (RHS)
0350	Br S of Glenstown	0750	Just d/s Portlaw Br

Assessment: Mostly satisfactory with just one location, Clonea Bridge (0300), unsatisfactory due to moderate pollution resulting from domestic sewage discharges. Improvement recorded at Lowry's Bridge (0400) where slightly polluted in previous survey.

River and Code : **CLONMORE STREAM (SUIR)** **16/C/11**
Tributary of : Suir OS Catchment No: 182
OS Grid Ref : S 139 740 Date(s) Surveyed : 05/09/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)	
		1999	2002
1000	Br u/s Suir R confl	3	4

Assessment: Satisfactory at only location examined representing significant improvement since 1999 when first included in national monitoring programme.

River and Code : **CLOVER** **16/C/04**
Tributary of : Black (Twomileborris) OS Catchment No: 182
OS Grid Ref : S 192 592 Date(s) Surveyed : 27/08/02

No.	Location	Biological Quality Ratings (Q Values)							
		1988	1989	1990	1992	1994	1996	1999	2002
0100	Br at Turnpike	2	2	1-2	2	2	1	2-3	3
0300	Br u/s Black R confl	3-4	-	-	3-4	-	2-3	4	4

Assessment: No change since previous survey with first location (0100) again moderately polluted due to suspected agricultural wastes.

River and Code : **DRISH** **16/D/02**
Tributary of : Suir OS Catchment No: 182
OS Grid Ref : S 130 565 Date(s) Surveyed : 26/08/02

No.	Location	Biological Quality Ratings (Q Values)							
		1976	1980	1983	1988	1992	1996	1999	2002
0040	Br u/s Longfordpass Br	-	-	-	-	-	3-4	3-4	3-4
0050	Longfordpass Br	-	-	-	3-4	-	-	-	-
0070	Br NE of Castletown	-	-	-	4	4-5	3-4	2/0	2-3/0
0100	Boolabeha Br	4-5	4	4	4-5	4	4	3-4	3
0200	Br S of Athlummon	-	3	4	4	4	4	4	3-4
0300	Drish Br	4-5	4	4	4	4	-	-	-
0400	Br u/s Suir R confl	-	4	4	4	4	4	4	4

Assessment: Just one of the five locations examined, in August 2002, was satisfactory representing further deterioration since previous survey. Eutrophic in the upper reaches near Longfordpass (0040) where flows are low in summer but the river is augmented by a large discharge of groundwater, from mining activities, in the Castletown area (0070). Here the river substratum and vegetation was found to be covered with a coating of slime formed by the sulphur-fixing bacterium *Beggiatoa alba*. The macroinvertebrate fauna density and diversity were restricted indicating toxic influences. Some recovery in faunal species richness was evident at Boolabeha (0100) but the river was still moderately polluted there. Further recovery, to slightly polluted conditions, was recorded in the Athlummon area (0200) and the river exhibited satisfactory conditions upstream of its confluence with the River Suir (0400).

River and Code : **DUAG** **16/D/03**
Tributary of : Tar OS Catchment No: 182
OS Grid Ref : S 014 145 Date(s) Surveyed : 27/06/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1988	1992	1996	1999	2002
0100 Br u/s Ballyporeen	4	4	4	4	4-5
0300 Ford ESE of Ballyporeen	3	3-4	-	-	-
0400 Br S of Kilcarroon	-	-	4	4	4
0600 Ford S of Carrigmore Crossroads	3-4	4	-	-	-
1100 Br at S end of Clogheen	4-5	4-5	4	3-4	3-4

Assessment: No significant change with the final location, in Clogheen (1100), again slightly polluted.

River and Code : **GLENBOY** **16/G/03**
Tributary of : Tar OS Catchment No: 182
OS Grid Ref : S 113 139 Date(s) Surveyed : 28/06/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1988	1992	1996	1999	2002
0200 Glenboy Br	4-5	4-5	4-5	4-5	4

Assessment: Continuing satisfactory but with some slight loss in ecological quality at the only location examined. Bank erosion-prevention works had been carried out upstream of bridge since previous survey.

River and Code : **GLENGALLA** **16/G/05**
Tributary of : Tar OS Catchment No: 182
OS Grid Ref : S 071 138 Date(s) Surveyed : 28/06/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1988	1992	1996	1999	2002
0100 Glengalla Br	5	5	4-5	5	4-5

Assessment: Continuing satisfactory. No significant change.

River and Code : **LINGAUN**

16/L/01

Tributary of : Suir

OS Catchment No: 182

OS Grid Ref : S 428 216

Date(s) Surveyed : 11/07/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)								
		1976	1977	1981	1985	1988	1992	1996	1999	2002
0050	Br u/s Whitehall Br	-	-	-	-	-	-	4-5	4	4
0100	Whitehall Br	-	-	5	4-5	4-5	4	-	-	-
0200	Lingaun Br	-	-	5	4-5	4-5	4-5	4	3-4	4
0300	Br at Inchanaglogh	-	-	4-5	4-5	4-5	4-5	4	4	4
0400	Br nr Annsborough Ho	-	5	5	5	4-5	4-5	4-5	4	4
0450	0.5 km d/s Cregg Br	-	-	5	5	-	-	-	-	-
0500	1 km d/s Cregg Br	-	-	-	-	5	4-5	-	-	-
0600	The Three Bridges	5	5	5	4	4	4	4	4	4

Assessment: Following improvement at Lingaun Bridge (0200) since previous survey all locations were again satisfactory. This situation, however, is threatened by an intermittent discharge, of unknown origin, from right-hand side immediately downstream of the Three Bridges (0600).

River and Code : **MOYLE**

16/M/01

Tributary of : Anner

OS Catchment No: 182

OS Grid Ref : S 248 275

Date(s) Surveyed : 10/07/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)								
		1981	1983	1986	1988	1992	1994	1996	1999	2002
0025	Tullamain Bridge	-	-	4	3-4	3-4	-	-	-	-
0050	Br NW of Mocklerstown	3-4	2	2	1	1	1	2-3	2	3
0100	Moyle Br	2	2	-	1	1	1	-	-	-
0200	Ballinavoher Br	-	-	-	1	3	-	3	dry	3
0270	Br S of Baptistgrange	-	-	-	-	-	-	3	3	3
0400	Br u/s Anner R confl	4-5	4	4	3-4	3-4	-	3-4	3	3-4

Assessment: Continuing unsatisfactory throughout length as a result of chiefly moderate pollution due to industrial and agricultural discharges. Tullamain Bridge (0025) no longer suitable for biological assessment.

River and Code	: NIER	16/N/01
Tributary of	: Suir	OS Catchment No: 182
OS Grid Ref	: S 147 139	Date(s) Surveyed : 06/06/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)						
		1976	1983	1988	1992	1996	1999	2002
0010	Br SW of Glennanore	-	-	-	-	4-5	4	4-5
0030	Birchell's Br	-	-	4	4-5	-	-	-
0070	Br SW of Knockalisheen	-	-	5	5	4	4	4-5
0100	Br ENE of Ballymacarbry	-	4-5	4-5	4-5	-	-	-
0200	Deerpark Br	-	-	4-5	4-5	4	4	4
0300	Four Mile Water Br	-	4-5	4-5	5	-	-	-
0400	Ballymakee Br	5	5	4-5	4-5	4-5	4	4

Assessment: Continuing satisfactory.

River and Code	: OUTERAGH STREAM	16/O/01
Tributary of	: Suir	OS Catchment No: 182
OS Grid Ref	: S 054 267	Date(s) Surveyed : 30/08/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)			
		1993	1996	1999	2002
0150	Br W of Outeragh	3	3-4	3	3
0200	Br u/s Suir R confl	3-4	3-4	3-4	3

Assessment: Continuing unsatisfactory with moderate pollution effects, due to suspected agricultural sources, at both locations.

River and Code : **POLLANASSA** **16/P/02**
Tributary of : Blackwater (Kilmacow) OS Catchment No: 182
OS Grid Ref : S 562 235 Date(s) Surveyed : 25/07/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1988	1993	1996	1999	2002
0040 (South) Br NE of Boolyglass	4	4	4	4	4
0100 Br SE of Harristown	3-4	3-4	4	4	4
0300 Ford (Br) SW of Ballynacooly	4	4	3-4	3	3-4
0500 Br u/s Blackwater R confl	4	4-5	4	4	4

Assessment: Again satisfactory with the exception of one location (0300) where slightly polluted by suspected agricultural wastes.

River and Code : **ROSSADREHID STREAM** **16/R/06**
Tributary of : Aherlow OS Catchment No: 182
OS Grid Ref : S 562 235 Date(s) Surveyed : 25/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)		
	1996	1999	2002
0100 Br u/s Aherlow R confl	4	3-4	3

Assessment: Further deterioration at the only location examined where ecological diversity was severely disrupted by abundant growths of filamentous algae. Water supply scheme upstream of sampling location.

River and Code : **ROSSESTOWN** **16/R/01**
Tributary of : Suir OS Catchment No: 182
OS Grid Ref : S 133 625 Date(s) Surveyed : 28/08/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)							
	1977	1981	1985	1988	1992	1996	1999	2002
0040 Br NE of Barnalisheen	-	-	-	3-4	3	3*	3*	3*
0100 Lisaticy Br	3-4	3-4	3-4	3-4	4	3-4	4	3
0200 Br S of Kilclonagh	4	4	4	3-4	4	4	4	3-4
0300 Br u/s Suir R confl	4	3-4	3-4	3-4	3-4	4	4	4

Continued

Rossetown Continued

Assessment: Deterioration at two locations since previous survey with the result that just one, the final location (0300), was satisfactory. The upper reinstated sample location (0020) is really a bog drain with mechanical peat extraction carried out upstream. Sewage as well as mine discharges reach the river just upstream of the second location (0040) where a slime growth coating, similar to that recorded in the Drish (cf) was found on the substratum and on cased caddis (fly larva) cases.

*Silt effects

River and Code : **SHANBALLY** **16/S/01**
Tributary of : Tar OS Catchment No: 182
OS Grid Ref : R 976 178 Date(s) Surveyed : 26/06/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1988	1992	1996	1999	2002
0100 Cahergal Br	4	4	4-5	4-5	4-5
0300 Coolgarranroe Br	5	5	-	-	-
0400 Br SSE of Burncourt	4	4	4	4	4

Assessment: Satisfactory. No change.

River and Code : **SMARTSCASTLE STREAM** **16/S/07**
Tributary of : Blackwater (Kilmacow) OS Catchment No: 182
OS Grid Ref : S 586 146 Date(s) Surveyed : 26/07/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)			
	1993	1996	1999	2002
0200 Br S of Knockbrack Gorse	4	3-4	4	4
0500 Br d/s Catsrock Br	4	4	4	3-4
0800 Br SW of Smartscastle (Main flow)	4-5	4	4	4

Assessment: Satisfactory apart from second location (0500), where slightly polluted, representing deterioration since last survey.

River and Code : **SUIR**
 Tributary of : Waterford Harbour
 OS Grid Ref : S 402 215

16/S/02
 OS Catchment No: 182
 Date(s) Surveyed : 02/09/02

Stations No.	Biological Quality Ratings (Q Values)												
	1971	1974	1978	1980	1982	1985	1986	1988	1992	1993	1996	1999	2002
0025	-	-	-	-	-	-	4	4	4	-	3-4	4	4
0100	5	5	5	5	-	4	3-4	3-4	4	-	4	4	3-4
0200	5	4	4-5	5	4	-	4	3-4	4	-	3-4	3-4	4
0300	3-4	3-4	2-3	3	3	-	3	3	3-4	-	3	3	3
0400	3-4	3-4	3	3	3	3	3	3	3	-	-	-	-
0500	4-5	4	3-4	3-4	3-4	-	4	4	4	-	3-4	4	4
0600	2	2	3	3	3	3	3	3	3	-	3	3	3
0810	2-3	2	2	3	2-3	3-4	3-4	-	-	-	-	-	-
0900	2	2-3	2-3	2-3	3	3	3	3	3-4	-	3-4	3-4	4
1100	-	4	3-4	3-4	3	-	-	3	3-4	-	3	3-4	3-4
1200	4	4	4	4	3-4	3-4	3-4	3	4	-	3-4	3-4	4
1300	5	4	5	5	4-5	4	4	4	4	-	4	4	4-5
1400	4-5	4-5	4-5	4	4	4	4	4	4	-	4	3-4	4
1500	4-5	4	4-5	4	4	-	4	4	-	4	4	4	3-4
1600	4-5	4-5	4	4	-	-	4-5	4	-	4	4	4	3-4
1700	4-5	4	4	4	-	-	4-5	3-4	-	4	4	4	4-5
1800	-	-	-	4	4	-	4	4	-	3-4	4	4	4
1930	-	-	-	3-4	3-4	-	3-4	-	-	3-4	3-4	3-4	3-4
2000	5	3-4	3-4	3-4	3-4	-	3-4	-	-	3	3-4	3-4	3-4
2200	5	3-4	4-5	4	-	-	4	4	-	4	4	4	4
2300	5	4	4-5	4-5	-	-	4	4	-	4	4	4	4-5
2400	5	4	5	5	4	-	4	4	-	4	4-5	4	4
2600	3-4	3	4	4	3-4	-	3-4	3	-	3	2-3	2-3	3-4
2700	4-5	3	3-4	4	3-4	-	3-4	3	-	3	3	3	3
2750	-	-	-	-	-	-	-	-	-	3	3	3	3-4
2800	4-5	3-4	2-3	2-3	3	-	3	-	-	-	-	-	-
2850	-	-	-	-	-	-	-	3	-	3	3	3	3

Sampling Station No.	Location
0025	Skehanagh Br
0100	Knockanroe Br
0200	Knocknageragh Br
0300	Penane Br
0400	Loughmore Br
0500	Rossestown Br
0600	Thurles Br
0810	Just N of Turtulla Ho (RHS)
0900	Cabragh Br
1100	Holycross Br
1200	Twoford Br (Main channel)
1300	Ardmayle Br
1400	Camus Br

Sampling Station No.	Location
1500	Golden Br
1600	Br nr Suirville Ho (New Br)
1700	2 km u/s Cahir
1800	Cahir Br
1930	Ford 1.8 km d/s Cahir Park Br
2000	Ardfinnan Br
2200	Newcastle Br
2300	Knocklofty Br
2400	Marfield, u/s Clonmel
2600	Twomilebridge
2700	Kilsheelan Br
2750	N of Churchtown Ho
2800	Coolnamuck Weir
2850	1.5 km u/s Carrick-on-Suir

Suir Continued

Assessment: Half of the locations sampled (12) were unsatisfactory due to either slight or moderate pollution in early September 2002 which is just one less than in the previous survey. The towns of Templemore, Thurles, Golden, Cahir and Clonmel are the major contributors to the pollution loading along the Suir's freshwater course. The Suir still supports populations of the crayfish throughout a large part of its length but the other protected species, the pearl mussel which is more sensitive to pollution, appears to have become extinct in the river in the past two decades.

River and Code	: TAR	16/T/01
Tributary of	: Suir	OS Catchment No: 182
OS Grid Ref	: S 115 147	Date(s) Surveyed : 27/06/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)								
		1976	1977	1981	1986	1988	1992	1996	1999	2002
0030	Br N of Redhill Ho	-	-	-	-	5	4-5	4-5	4-5	4-5
0100	Kilganny Br	-	-	5	4-5	4-5	4-5	-	-	-
0200	Garrymore Br	-	4	5	4-5	4	4-5	4	4-5	4-5
0300	Br just N of Clogheen	-	-	4	4-5	4-5	4	-	4-5	3-4
0420	Br nr Castlegrace Ho	-	-	-	5	4	4	-	-	-
0460	Ford WNW of Kilgroggy Ho	-	-	-	-	-	-	4	4	4-5
0500	Goats Br	-	-	5	5	4-5	4-5	-	-	-
0600	Ford u/s Tar Br	5	4-5	5	4-5	4-5	4	4-5	4-5	4-5

Assessment: Satisfactory apart from the effects of sewage entering river, from right-hand side, some 40 metres downstream of Clogheen Bridge (0300).

River and Code : **THONOGE**

16/T/02

Tributary of : Suir

OS Catchment No: 182

OS Grid Ref : S 066 204

Date(s) Surveyed : 30/09/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)						
		1981	1985	1988	1992	1996	1999	2002
0010	Kilcoran Br	-	-	-	-	4	4	4-5
0050	Curraghmore Br	-	4-5	4	4-5	-	-	-
0080	Br u/s Ballylooby	-	-	-	-	4	4	4
0100	Ford 0.5 km d/s Ballylooby	4	4-5	4	4-5	-	-	-
0200	East Br, Tubbrid	4	4-5	4-5	4	4	4	4

Assessment: Satisfactory where sampled; the lowermost reaches of the river dry out in most summers thus precluding sampling below Tubbrid (0200). No significant change in water quality status. The pearl mussel (*Margaritifera margaritifera*) an invertebrate species which requires high water quality is still present in the river in very low numbers but is not apparently reproducing.

HYDROMETRIC AREA 19

Lee, Cork Harbour and Youghal Bay

[Aughnaboy]	[19A02]
Awboy	19A03
Blarney	19B02
[Bride (Lee)]	[19B04]
Butlerstown	19B06
Cummer	19C02
Cusloura	19C01
Dissour	19D03
Douglas (Sullane)	19D04
Dripsey	19D06
[Dungourney]	[19D07]
Finnow (Foherish)	19F01
Foherish	19F02
Garrane (Lee)	19G03
Glashaboy	19G01
Keel	19K02
Laney	19L01
Lee	19L03
Martin	19M01
[Owenboy]	[19O01]
[Owennacurra]	[19O03]
Shournagh	19S01
Sullane	19S02
[Templebodan]	[19T01]
Toon	19T02
Womanagh	19W01

Due to time constraints the rivers shown in square brackets could not be surveyed in 2002; they will be surveyed in 2003.

River and Code : **AWBOY** **19/A/03**
Tributary of : Laney OS Catchment No: 228
OS Grid Ref : W 349 790 Date(s) Surveyed : 08/10/02

Sampling Stations		Biological Quality Ratings (Q Values)				
No.	Location	1990	1994	1997	1999	2002
0200	Awboy Br	5	4-5	4	4	4-5

Assessment: Continuing satisfactory.

River and Code : **BLARNEY** **19/B/02**
Tributary of : Lee OS Catchment No: 228
OS Grid Ref : W 592 749 Date(s) Surveyed : 08/08/02

Sampling Stations		Biological Quality Ratings (Q Values)			
No.	Location	1994	1997	1999	2002
0500	Br NW of Killeens Cross	3-4	3-4	3-4	3-4

Assessment: Continuing slightly polluted at the only location examined. The course of this stream has been altered, in its lower reaches, in the past.

River and Code : **BUTLERSTOWN** **19/B/06**
Tributary of : Glashaboy (Lough Mahon) OS Catchment No: 193
OS Grid Ref : W 732 749 Date(s) Surveyed : 10/09/02

Sampling Stations		Biological Quality Ratings (Q Values)				
No.	Location	1990	1994	1997	1999	2002
0200	Trantstown Br	4	4	4	3-4	3*
0500	Br N of Butlerstown	4-5	4-5	4-5	4-5	4
0800	Br u/s Glashaboy R confl	4	4	4	4	3-4

Assessment: General deterioration with a moderate degree of ecological disruption, caused by road construction works (N8), at the first location (0200) and slight pollution, due to domestic sewage, at the final one (0800) which is immediately upstream of the confluence with the Glashaboy River where small amounts of oil were also recorded in the substratum. *Silt effects.

River and Code : **CUMMER** **19/C/02**
Tributary of : Lee (Cork) OS Catchment No: 228
OS Grid Ref : W 385 681 Date(s) Surveyed : 09/08/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0200 Br W of Elmglyn	-	4	4-5	4	4
0500 Br NNE of Teereevan	-	4-5	4-5	4-5	3-4
0800 Athsollis Br	3-4	4	4	4	3-4

Assessment: Significant change with deterioration, to slight pollution, at two of the three locations (0500, 0800).

River and Code : **CUSLOURA** **19/C/01**
Tributary of : Awboy OS Catchment No: 228
OS Grid Ref : W 328 803 Date(s) Surveyed : 08/10/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0200 Br u/s Awboy R confl	4	4	4	4	4

Assessment: Satisfactory. No change in water quality status. There has, however, been an increase in sand deposition at the site.

River and Code : **DISSOUR** **19/D/03**
Tributary of : Womanagh OS Catchment No: 191
OS Grid Ref : X 022 748 Date(s) Surveyed : 09/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1989	1994	1997	1999	2002
0200 Br WSW of Ballyre	4-5	3	4	4	4
0400 Killeagh Br	4-5	4	4-5	3-4	3-4
0600 Br just u/s Womanagh R confl	4-5	4*	3-4	4	4

Assessment: No change. Satisfactory apart from middle reach where treated sewage enters river, from right-hand side, immediately downstream of Killeagh Bridge (0400). *Silt effects.

River and Code : **DOUGLAS (SULLANE)** **19/D/04**
 Tributary of : Sullane OS Catchment No: 228
 OS Grid Ref : W 221 757 Date(s) Surveyed : 12/09/02

No.	Location	Biological Quality Ratings (Q Values)				
		1990	1994	1997	1999	2002
0200	Br S of Gortnascarty	-	4	4	4	4
0700	Br u/s Sullane R confl	4-5	4-5	4-5	4-5	4-5

Assessment: Satisfactory. No change.

River and Code : **DRIPSEY** **19/D/06**
 Tributary of : Lee (Cork) OS Catchment No: 228
 OS Grid Ref : W 487 737 Date(s) Surveyed : 09/09/02

No.	Location	Biological Quality Ratings (Q Values)							
		1976	1981	1986	1990	1994	1997	1999	2002
0010	NW of Toureen	-	-	-	-	4	4	4	3-4
0150	Dripsey Br, W of Killeenleigh	-	-	3-4	4	4	4-5	4-5	4-5
0300	Luskins Br	-	5	4-5	4-5	4-5	3-4	4	4
0400	Dripsey Br	3/0	4	3/0	4	4	3-4	4-5	4

Assessment: Satisfactory apart from uppermost location (0010) where large crops of filamentous algae were recorded downstream of forestry plantation.

River and Code : **FINNOW (FOHERISH)** **19/F/01**
 Tributary of : Foherish OS Catchment No: 228
 OS Grid Ref : W 288 754 Date(s) Surveyed : 14/06/02

No.	Location	Biological Quality Ratings (Q Values)				
		1990	1994	1997	1999	2002
0100	Second Br u/s Bealahacreagh Br	-	4	4	4	4
0300	Bealahacreagh Br	4	4-5	4-5	4	4-5

Assessment: Continuing satisfactory. No significant change.

River and Code	: FOHERISH	19/F/02
Tributary of	: Sullane	OS Catchment No: 228
OS Grid Ref	: W 296 733	Date(s) Surveyed : 12/06/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)				
		1990	1994	1997	1999	2002
0100	Br N of Curraleigh	-	5	4-5	4-5	4-5
0200	Foherish Br	5	4-5	4-5	4-5	4-5
0300	W of Caherbirrane	5	4-5	4-5	4-5	4-5
0400	Garranenagappul Br (Clondrohid Br)	4-5	4-5	4-5	4-5	4
0600	Carrigaphooca Br	4-5	4-5	4-5	4	4-5

Assessment: Continuing satisfactory with no significant change in water quality status which is good enough, at some sites, to support the protected pearl mussel. Dumping of rubbish, however, at the rear of the co-op at Clondrohid Bridge (0400) was again severely impairing the aesthetic quality at that location.

River and Code	: GARRANE (LEE)	19/G/03
Tributary of	: Foherish	OS Catchment No: 228
OS Grid Ref	: W 270 811	Date(s) Surveyed : 12/06/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)				
		1990	1994	1997	1999	2002
0200	Br u/s Foherish River	4-5	4	4-5	4-5	4-5

Assessment: Continuing satisfactory.

River and Code : **GLASHABOY (LOUGH MAHON)** **19/G/01**
 Tributary of : Sea - Lough Mahon OS Catchment No: 193
 OS Grid Ref : W 727 727 Date(s) Surveyed : 10/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)								
	1971	1976	1981	1986	1990	1994	1997	1999	2002
0200 Ballyvorisheen Br	5	3-4	4	3-4	4	4	3-4	3-4	3-4
0300 Dunbulloge Br	5	4-5	4-5	4	4-5	3	4	4	4
0400 Upper Glanmire Br	5	5	4	4	4-5	4	4	4	4
0500 Br u/s Butlerstown R confl	5	5	4-5	4	4	-	-	-	-
0600 d/s Butlerstown R confl	-	-	-	-	4	4	4	4	4

Assessment: Mostly satisfactory. No change with upper reaches (0200) again eutrophic. The Glashaboy previously supported the protected pearl mussel but the species is apparently now extinct in the river.

River and Code : **KEEL** **19/K/02**
 Tributary of : Foherish OS Catchment No: 228
 OS Grid Ref : W 282 814 Date(s) Surveyed : 12/06/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0200 Keel Br	4-5	4	4	4	4-5

Assessment: Continuing satisfactory.

River and Code : **LANEY** **19/L/01**
 Tributary of : Sullane OS Catchment No: 228
 OS Grid Ref : W 352 725 Date(s) Surveyed : 08/10/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)								
	1976	1981	1986	1990	1994	1997	1999	2002	
0100 Carrigagulla Br	-	5	5	5	4	4-5	4	4-5	
0200 Coppeleenbawn Br	-	5	5	5	4	4-5	4-5	4-5	
0400 Morris's Br	-	5	5	5	4-5	4-5	4-5	4-5	
0500 Ford's Mill, u/s Sullane R confl	5	5	5	4	4-5	4-5	4-5	4-5	

Assessment: Continuing satisfactory with no significant change. The protected pearl mussel lives in some stretches of the river.

River and Code : **LEE (CORK)** **19/L/03**
Tributary of : Cork Harbour (Lough Mahon) OS Catchment No: 228
OS Grid Ref : W 680 721 Date(s) Surveyed : 11/09/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)									
		1971	1976	1981	1986	1990	1994	1997	1999	2002	
0010	Just u/s Gouganebarra Lake	-	-	-	-	-	4-5	4-5	4	4	
0040	Br S of Gortafludig	-	-	-	-	-	4-5	4-5	4	4-5	
0100	Inchinossig Br	5	5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	
0200	Foot-bridge at Castlemasters	5	5	5	4-5	4-5	4	4-5	4	4	
0300	Dromcarra Br	5	5	5	4-5	5	4-5	4-5	4	4	
0600	Inishcarra Br	4-5	4-5	4	4	3-4	3	3	3	3	
0700	Leemount, Carrigrohane	5	5	4	4	4	4	4	4	4	

Assessment: No significant change. Satisfactory apart from Inishcarra Bridge (0600) where again highly eutrophic. The protected pearl mussel has apparently become scarce in the river in the past two decades.

River and Code : **MARTIN** **19/M/01**
Tributary of : Shournagh OS Catchment No: 228
OS Grid Ref : W 607 753 Date(s) Surveyed : 08/08/02

Stations No.	Biological Quality Ratings (Q Values)										
	1971	1976	1978	1981	1983	1986	1990	1994	1997	1999	2002
0100	4-5	4	4-5	4	4	4	4	4	3-4	3	3
0200	2	2	1	3-4	3-4	3	3	4	4	4	4
0300	-	4	4-5	4	4	4	4	4	4	4	4
0400	4	5	4-5	4	4	4-5	4	4	4	4	4
0600	3-4	4-5	4-5	4	3-4	4	4	4	4	3-4	3-4

Sampling Station		Sampling Station	
No.	Location	No.	Location
0100	Br W of Lissavoura	0400	Putland's Br (Waterloo)
0200	1 km S of Rathduff (SE of Grenagh)	0600	Bawnafinny Br
0300	Br near Birchill Ho		

Assessment: No change since last survey with the first and final location (0100, 0600) again unsatisfactory due respectively to moderate and slight pollution effects. The sources of the pollution are suspected to be agricultural at the former and domestic (Blarney) at the latter.

River and Code	: SHOURNAGH	19/S/01
Tributary of	: Lee (Cork)	OS Catchment No: 228
OS Grid Ref	: W 609 717	Date(s) Surveyed : 07/08/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)							
		1976	1981	1986	1990	1994	1997	1999	2002
0025	Br ENE of Coolmona	-	-	-	-	-	4-5	4	4
0100	Ballyvodane Br	-	5	4-5	4-5	4	4-5	4	4
0200	E of Gortdonaghmore	-	5	4-5	4-5	4-5	4-5	4-5	4-5
0300	Tower Br (d/s Martin R confl)	-	5	4-5	4	4-5	4	3-4	3-4
0400	Healy's Br	4-5	5	4	4-5	-	-	-	-
0500	Bannow Br	-	-	-	-	4-5	4-5	4-5	4-5

Assessment: No change. Continuing mostly satisfactory but again slightly polluted below the Martin River confluence (0300).

River and Code	: SULLANE	19/S/02
Tributary of	: Lee (Cork)	OS Catchment No: 228
OS Grid Ref	: W 352 725	Date(s) Surveyed : 14/06/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)								
		1971	1976	1981	1986	1990	1994	1997	1999	2002
0100	Br nr Coolea	5	5	5	4-5	4	4	4-5	4-5	4-5
0170	First Br d/s Ballyvourney Br	-	-	-	-	4-5	4-5	4	4-5	4-5
0200	Br d/s Douglas R confl	5	5	5	5	4-5	4-5	4-5	4-5	4-5
0300	Sullane Br	-	-	5	4-5	5	4-5	4-5	4-5	4-5
0400	Linnamilla Br	5	5	5	5	5	5	5	5	5
0480	Ford u/s Laney R confl	-	-	-	-	-	4	4	4	4
0500	New Br, d/s Macroom	5	5	5	4	4-5	-	-	-	-

Assessment: Continuing satisfactory. The protected pearl mussel inhabits parts of the river.

River and Code	: TOON	19/T/02
Tributary of	: Lee (Cork)	OS Catchment No: 228
OS Grid Ref	: W 300 707	Date(s) Surveyed : 12/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0200 Br S of Lack	4	4	4-5	4	4-5
0400 Br NE of Cleanrath North	4	4	4-5	4	4-5
0700 Second Br u/s Lee R confl	4	4-5	4-5	4-5	4-5
0800 Br u/s Lee R confl (Toon Br)	3-4	3-4	3-4	3-4	4

Assessment: Satisfactory throughout, for the first time since sampling began in 1990, when examined after flooding in September 2002. The lower reach, including the final location (0800), is hydromorphologically different than upstream following some canalization in the past. The pearl mussel still lives in part of the upper reaches.

River and Code	: WOMANAGH	19/W/01
Tributary of	: Sea - Youghal Bay	OS Catchment No: 191
OS Grid Ref	: X 047 729	Date(s) Surveyed : 13/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1989	1994	1997	1999	2002
0300 Br WNW of Donickmore Ho	-	-	4	4	4
0500 Br NE of Dungourney	3	3	3-4	4	4
0700 Second Br N of Mogeely	4	4	4-5	4	4
1000 Br in Castlemartyr	3-4	4	3-4	3	3-4
1300 S of Ballyhonock Lake	4	4-5	3-4	3-4	3

Assessment: Known as the Kiltha River in upper reaches, it was satisfactory except in lower reaches (1000, 1300) where again suspected discharges from Mogeely (industrial) and Castlemartyr (sewage) were responsible, respectively, for the slight and moderate pollution recorded. The lower reaches had large colonies of two American alien plants, the water fern (*Azolla filiculoides*) and least duckweed (*Lemna minuta*); these floating species reflect highly eutrophic conditions.

Balance of HYDROMETRIC AREA 22

Laune-Maine-Dingle Bay

Most rivers in this area were surveyed in 2001

Brown Flesk	22B03
Croaghane	22C09
Dogue	22D03
Emlagh	22E01
Fahaduff	22F09
Glantane	22G07
Groin	22G08
Little Maine	22L02
Maine	22M01
Milltown	22M03
Owenalondrig	22O01
Owenascaul	22O02
Quagmire	22Q01
Shanowen (Maine)	22S01)

River and Code : **BROWN FLESK** **22/B/03**
Tributary of : Maine OS Catchment No: 197
OS Grid Ref : Q 932 061 Date(s) Surveyed : 18/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)								
	1971	1976	1981	1986	1990	1994	1996	1998	2002
0050 Br u/s Barna Stream confl	-	-	5	-	4-5	4	4-5	4-5	4
0100 Rice Br	-	5	5	4-5	4	2-3	3-4	3-4	4
0200 Twiss Br	-	-	4-5	4	4	3	4	3-4	4
0300 Flesk Br, Currow	-	5	5	5	4-5	4	3-4	4	4-5
0400 O'Connell Br	-	-	4	5	4-5	4	3-4	4	4-5
0500 Br u/s Maine R confl	5	5	5	5	4-5	4	4	4	4-5

Assessment: Satisfactory following improvement, since previous survey, at two locations (0100, 0200). A lot of farm development has taken place in the upper reaches in that time also. The protected pearl mussel still survives in the lower reaches.

River and Code : **CROAGHANE** **22/C/09**
Tributary of : Shanowen (Kerry) OS Catchment No: 197
OS Grid Ref : R 062 092 Date(s) Surveyed : 17/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1996	1998	2002
0100 Sheheree Br		4-5	4	4	4

Assessment: Continuing satisfactory.

River and Code : **DOGUE** **22/D/03**
Tributary of : Brown Flesk OS Catchment No: 197
OS Grid Ref : R 021 023 Date(s) Surveyed : 15/05/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1996	1998	2002
0300 Ford d/s Carker Branch confl		3	3	4	4
0400 Br u/s Brown Flesk R confl		4	4	4	4

Assessment: Satisfactory at both locations despite signs of some enrichment.

River and Code : **EMLAGH** **22/E/01**
Tributary of : Sea - Castlemaine Harbour OS Catchment No: t3
OS Grid Ref : Q 660 006 Date(s) Surveyed : 18/06/02

No.	Location	Biological Quality Ratings (Q Values)				
		1990	1994	1996	1998	2002
0200	Br W of Emlagh	4-5	4-5	4-5	4-5	4-5
0400	Br S of Ballycullane	4-5	4-5	4-5	4-5	4-5

Assessment: Continuing satisfactory. An increase in sand deposition was recorded at the uppermost location (0200).

River and Code : **FAHADUFF** **22/F/09**
Tributary of : Maine OS Catchment No: 197
OS Grid Ref : Q 985 093 Date(s) Surveyed : 16/09/02

No.	Location	Biological Quality Ratings (Q Values)			
		1994	1996	1998	2002
0200	Br NE of Portduff	3-4	4	4	4
0400	Br u/s Maine R confl	3-4	3-4	4	3-4

Assessment: Reversion to slight pollution upstream of confluence with River Maine (0400) from suspected agricultural sources. Continuing satisfactory at other location (0200).

River and Code : **GLANTANE** **22/G/07**
Tributary of : Brown Flesk OS Catchment No: 197
OS Grid Ref : R 062 032 Date(s) Surveyed : 15/05/02

No.	Location	Biological Quality Ratings (Q Values)				
		1990	1994	1996	1998	2002
0200	Leaha Br	4	3-4	4	4	4-5

Assessment: Continuing satisfactory with an increase in biological diversity since first sampled in 1990.

River and Code : **GROIN** **22/G/08**
Tributary of : Castlemaine Harbour OS Catchment No: 198
OS Grid Ref : Q 794 023 Date(s) Surveyed : 18/06/02

No.	Location	Biological Quality Ratings (Q Values)				
		1990	1994	1996	1998	2002
0300	Br E of White Gate Crossroads	4-5	4	4-5	4	4-5

Assessment: Continuing satisfactory. No significant change.

River and Code : **LITTLE MAINE** **22/L/02**
Tributary of : Maine OS Catchment No: 197
OS Grid Ref : Q 953 082 Date(s) Surveyed : 16/09/02

No.	Location	Biological Quality Ratings (Q Values)				
		1990	1994	1996	1998	2002
0500	Br near Fairy Gate	4-5	4	4-5	4	4
1000	Br u/s Maine R confl	4	3-4	4	3-4	4

Assessment: Satisfactory following improvement, since previous survey, at lower location (1000). Also known as Glangeenty River at upper location (0500).

River and Code : **MAINE** **22/M/01**
Tributary of : Sea - Castlemaine Harbour OS Catchment No: 197
OS Grid Ref : Q 778 013 Date(s) Surveyed : 17/09/02

No.	Location	Biological Quality Ratings (Q Values)								
		1971	1976	1981	1986	1990	1994	1996	1998	2002
0100a	Main Channel									
0200	(East) Br S of Castleisland	-	-	4	4	4	3-4	3-4	3-4	4
0400	Br 2km d/s Castleisland	3-4	4-5	4	4	3	3-4	3	3	3-4
0500	Br NW of Currans	5	4	4-5	4	4	4	3-4	3-4	4
0600	Maine Br, Currans	5	5	4-5	4	4	-	3-4	-	-
0700	Maine Br (Lower)	-	-	5	4	4	4	-	4	4

Assessment: Mostly satisfactory following improvements in Castleisland (0200) and at Currans (0500). Slightly polluted downstream of Castleisland (0400).

River and Code : **MILLTOWN (KERRY)** **22/M/03**
Tributary of : Sea - Dingle Harbour OS Catchment No: 206
OS Grid Ref : Q 435 011 Date(s) Surveyed : 19/06/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1996	1998	2002
0100 Glens Br	4	4	-	-	-
0110 Br W of Glens Br	-	-	4	4	3-4
0200 Br d/s Glens Br	3	3	4	4	3
0300 Ford E of Kilfountan	3	3	3	3	3

Assessment: Unsatisfactory throughout due to slight and moderate pollution. The causes of pollution are suspected agricultural discharges in upper reaches (e.g. drain carrying slurry at 0200) and agricultural and fish-farm sources in lower reach (0300).

River and Code : **OWENALONDRIG** **22/O/01**
Tributary of : Sea - Dingle Bay OS Catchment No: 202
OS Grid Ref : Q 490 004 Date(s) Surveyed : 19/06/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1996	1998	2002
0200 Br d/s Fairy Glen	4	4	4	4	4
0500 Br in Foheraghmore	4	4	3-4	4	3

Assessment: Deterioration, since last survey, at the lower of the two sample locations where moderate amounts of slime growths (*Leptomitia lacteus*) were recorded. The cause of the moderately polluted condition was farm waste entering river, from left-hand side, 100 m upstream of Bridge in Foheraghmore (0500).

River and Code : **OWENASCAUL** **22/O/02**
Tributary of : Sea - Dingle Bay OS Catchment No: 200
OS Grid Ref : Q 596 003 Date(s) Surveyed : 19/06/02

Sampling Stations		Biological Quality Ratings (Q Values)				
No.	Location	1990	1994	1996	1998	2002
0800	Br 1.6km u/s Anascaul	4	4	4-5	4-5	4
1000	Br 1.3km d/s Anascaul	-	4-5	4-5	4-5	4

Assessment: Satisfactory but with some loss in ecological quality at both locations. A colony of the protected pearl mussel has vanished from the upper reach (0800) where land clearance work had been undertaken.

River and Code : **QUAGMIRE** **22/Q/01**
Tributary of : Owneykeagh OS Catchment No: 207
OS Grid Ref : W 090 907 Date(s) Surveyed : 17/05/02

Sampling Stations		Biological Quality Ratings (Q Values)				
No.	Location	1990	1994	1996	1998	2002
0200	Br d/s Tooreennamult Br	-	4	4-5	4-5	4-5
0400	Annagh Br	4	4	4	4-5	4
0500	0.5km u/s Owneykeagh R confl	4	4-5	4-5	-	-

Assessment: No significant change in water quality status but some slight enrichment recorded at second location (0400).

River and Code : **SHANOWEN (KERRY)** **22/S/01**
Tributary of : Maine OS Catchment No: 197
OS Grid Ref : R 007 023 Date(s) Surveyed : 17/09/02

Sampling Stations		Biological Quality Ratings (Q Values)								
No.	Location	1971	1976	1981	1985	1990	1994	1996	1998	2002
0020	Second Br d/s Cloone R confl	-	-	-	-	3	3	3	3-4	3-4
0100	Br u/s Maine R confl	5	4-5	4-5	4	3-4	3-4	4	4	2-3

Assessment: Unsatisfactory following significant deterioration at second location (0100) where moderate amounts of slime growths were present. The moderately polluted condition was a result of farm slurry entering river, from left-hand side, 75 m upstream of the bridge.

HYDROMETRIC AREA 23 (Balance*)

Tralee Bay - Feale

Feohanagh	23F02
Finglas	23F03
Glennahoo	23G05
Owencashla	23O02
Owenmore	23O03
Owennafeana	23O04
Scorid	23S01

*Most of the rivers in this Hydrometric Area were surveyed in 2001.

River and Code : **FEOHANAGH** **23/F/02**
Tributary of : Sea - Smerwick Harbour OS Catchment No: 205
OS Grid Ref : Q 388 097 Date(s) Surveyed : 19/06/02

No.	Location	Biological Quality Ratings (Q Values)				
		1987	1991	1996	1998	2002
0100	Ballybrack Br	5	5	5	5	4-5
0500	Br at Feohanagh	5	4-5	4	4	4-5

Assessment: Satisfactory. No significant change in water quality status.

River and Code : **FINGLAS** **23/F/03**
Tributary of : Sea - Tralee Bay OS Catchment No: t3
OS Grid Ref : Q 701 103 Date(s) Surveyed : 21/06/02

No.	Location	Biological Quality Ratings (Q Values)			
		1993	1996	1998	2002
0400	Br d/s Curraduff Br	5	5	4-5	4-5

Assessment: Satisfactory. No change.

River and Code : **GLENNAHOO** **23/G/05**
Tributary of : Scorid OS Catchment No: 201
OS Grid Ref : Q 538 113 Date(s) Surveyed : 20/06/02

No.	Location	Biological Quality Ratings (Q Values)		
		1991	1996	1998
0200	Br u/s Scorid R confl	4-5	4-5	4-5

Assessment: Again satisfactory at the only location examined which is approximately 150 m upstream of the confluence with the Scorid River.

River and Code : **OWENCASHLA** **23/O/02**
Tributary of : Sea - Tralee Bay OS Catchment No: 199
OS Grid Ref : Q 653 114 Date(s) Surveyed : 21/06/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1991	1996	1998	2002
0300 First Br u/s Sea	4	4-5	4-5	4-5	4

Assessment: Satisfactory but with slight loss of ecological quality. Substantial amounts of refuse (including household items such as fridges and cookers) had been dumped on right-hand bank of river. As during 1998 survey other domestic rubbish was also being burned unattended on the bank of the river.

River and Code : **OWENMORE (KERRY)** **23/O/03**
Tributary of : Sea - Brandon Bay OS Catchment No: 203
OS Grid Ref : Q 513 110 Date(s) Surveyed : 20/06/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1991	1996	1998	2002
<i>Lough Cruttia Branch</i>					
0100 Br d/s L Cruttia	5	5	5	4-5	5
<i>Cloghane Branch</i>					
0200 0.5 km d/s L Gal	4	5	4-5	4-5	4-5
<i>Main Channel</i>					
0300 Br at Boherboy	5	5	5	5	5

Assessment: Continuing satisfactory. A lake effect, with present-moderate amounts of filamentous algae, is consistently recorded downstream of Lough Gal (0200).

River and Code : **OWENNAFEANA** **23/O/04**
Tributary of : Sea - Brandon Bay OS Catchment No: 204
OS Grid Ref : Q 524 146 Date(s) Surveyed : 20/06/02

Sampling Stations		Biological Quality Ratings (Q Values)				
No.	Location	1987	1991	1996	1998	2002
0100	Teer Br	4	4-5	4-5	4-5	4-5

Assessment: Satisfactory. No change.

River and Code : **SCORID** **23/S/01**
Tributary of : Sea - Brandon Bay OS Catchment No: 201
OS Grid Ref : Q 537 114 Date(s) Surveyed : 20/06/02

Sampling Stations		Biological Quality Ratings (Q Values)				
No.	Location	1987	1991	1996	1998	2002
0200	Ford (Br) d/s Kilmore Br	-	-	4-5	4-5	4-5

Assessment: Continuing satisfactory.

HYDROMETRIC AREA 24

Shannon Estuary South

Ahacronane	24A01
# Ahavarraga Stream	24A02
Arra	24A04
Ballylongford	24B03
[Barnakyle]	[24B05]
Broadford Stream	24B07
Bunoke	24B06
[Camoge]	[24C01]
[Charleville Stream]	[24C02]
Clonshire	24C03
Deel (Newcastlewest)	24D02
Flemingstown Stream	24F03
Glencorbry	24G03
Greanagh	24G05
Lismakeery Stream	24L03
# Loobagh	24L01
[Mahore]	[24M04]
Maigue	24M01
Morningstar	24M02
Owvane	24O02
Shanagolden Stream	24S02
Tarbert Stream	24T01

#Having seriously polluted stretch(es) at time of this survey.

Due to time constraints the rivers shown in square brackets could not be surveyed in 2002; they will be surveyed in 2003.

River and Code : **AHACRONANE** **24/A/01**
 Tributary of : Sea - Shannon Estuary OS Catchment No: 155
 OS Grid Ref : R 282 500 Date(s) Surveyed : 19/08/02

Sampling Stations		Biological Quality Ratings (Q Values)				
No.	Location	1989	1993	1996	1999	2002
0400	Br S of Spa Wells	3	3	3	3	3
0900	Br SW of Barrigone	3	3	3	3	3

Assessment: Unsatisfactory with only moderate ecological quality again recorded in this calcareous, spring-influenced river.

River and Code : **AHAVARRAGA STREAM** **24/A/02**
 Tributary of : Deel (Newcastlewest) OS Catchment No: 155
 OS Grid Ref : R 367 258 Date(s) Surveyed : 21/08/02

Sampling Stations		Biological Quality Ratings (Q Values)				
No.	Location	1989	1993	1996	1999	2002
0200	Br at W side of Drumcolliher	4	4	4	4	4
0400	Br 0.5 km d/s Priests Br	1	2-3	-	2	2
0800	W of Mundellihy	1-2	3	2	2-3	3

Assessment: The Ahavarraga, or Ahavarragh, Stream showed no significant change when examined in September 2002. Satisfactory upstream of Drumcolliher (0200) but seriously polluted in middle reaches (0400) and moderately polluted in lower reaches (0800) due respectively to sewage and farm wastes.

River and Code : **ARRA** **24/A/04**
 Tributary of : Deel (Newcastlewest) OS Catchment No: 155
 OS Grid Ref : R 274 335 Date(s) Surveyed : 20/08/02

Sampling Stations		Biological Quality Ratings (Q Values)				
No.	Location	1989	1993	1996	1999	2002
0300	Br S of Dromin (LHS)	4	4	4	4	4
0310	Br S of Dromin (RHS)	3	4	4	4	4
0500	Cork Br, Newcastle West	3	3-4	3	3-4	4

Assessment: Satisfactory following improvement, since previous survey, in Newcastle West (0500).

River and Code : **BALLYLONGFORD** **24/B/03**
Tributary of : Sea - Shannon Estuary OS Catchment No: 155
OS Grid Ref : Q 998 448 Date(s) Surveyed : 16/07/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1988	1994	1996	1999	2002
0300 Br N of Kilgarvan	4	3	3-4	4	4
0400 Br SW of Shrone	2-3	3	1-2	2-3	2-3
0700 Gortanacooka Br	3	3	3	3	3-4

Assessment: Also known as the Ballyline River it was again satisfactory at just one of the three locations (0300) with moderate and slight pollution, due to suspected agricultural sources, at others (0400, 0700). Bank clearance had been carried out, at final location, since previous survey.

River and Code : **BROADFORD STREAM** **24/B/07**
Tributary of : Bunoke OS Catchment No: 155
OS Grid Ref : R 320 238 Date(s) Surveyed : 20/08/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1988	1993	1996	1999	2002
0300 Br u/s Broadford Br	4	4	4	4	4
0500 Lisnafulla Br	4	4	3	2-3	3

Assessment: No significant change with upper reaches (0300) again satisfactory and lower reaches (0500) moderately polluted due to suspected domestic sewage sources.

River and Code : **BUNOKE** **24/B/06**
Tributary of : Deel (Newcastlewest) OS Catchment No: 155
OS Grid Ref : R 302 328 Date(s) Surveyed : 20/08/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)					
		1984	1989	1993	1996	1999	2002
0025	Br S of Glenquin Ho	-	3	2-3	2	3	3
0050	Br NE of Cantogher	-	2-3	3	2-3	3	3
0100	Anacomusk Br (d/s side)	-	3	3-4	3-4	3	3
0200	Bunoke Br	3-4	3-4	4	4	4	4

Assessment: Mostly unsatisfactory due to widespread moderate pollution from suspected industrial and agricultural sources. The lower reach (0200) was again satisfactory; the crayfish, a protected species, was recorded there in August 1999.

River and Code : **CLONSHIRE** **24/C/03**
Tributary of : Greanagh OS Catchment No: 155
OS Grid Ref : R 440 454 Date(s) Surveyed : 18/07/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)					
		1988	1989	1993	1996	1999	2002
0300	Br N of Ballingarry	3-4	-	3	3	3	3
0600	Milltown Br	3	-	3-4	3-4	3	3
0700	Drehidnaman Br (LHS)	3	3	3	3	3	3
0710	Drehidnaman Br (RHS)	1	3	3	3	3	3
0900	Tuogh Br	3-4	-	3-4	3	3	3

Assessment: No change. Continuing unsatisfactory due to widespread moderate pollution from suspected agricultural sources.

River and Code : **DEEL (NEWCASTLEWEST)** 24/D/02
Tributary of : Sea - Shannon Estuary OS Catchment No: 155
OS Grid Ref : R 332 528 Date(s) Surveyed : 22/08/02

Stations No.	Biological Quality Ratings (Q Values)											
	1971	1975	1978	1980	1982	1984	1986	1989	1993	1996	1999	2002
0100	1	1	1	3	3	3	2-3	3	3	3	3-4	3-4*
0200	4	4	3	3-4	3	3	3	3	3	3-4	3-4	4
0300	3	3-4	3-4	3-4	3	3-4	3-4	3	3	3-4	3	3
0400	4	3-4	3-4	3-4	3	3-4	3-4	3	3	3-4	3-4	4
0500	4	4	3-4	3-4	3-4	3	3-4	3-4	4	4	3-4	4
0600	3	3	3	3	3	3	2-3	3	3	2-3	2	2-3
0700	3	3	3	3	3	3	3	3	3	2-3	2-3	3
0800	3	2-3	3	3	3	2	3	3	3	3	3	3
0900	4	-	3	3-4	3	2-3	3-4	3	3	-	-	-
1000	4-5	4	3-4	4	3-4	3-4	4	3	3-4	3	3	3
1100	4	-	4	3-4	3	3-4	4	4	3-4	3-4	3-4	3-4
1200	4-5	4	3	4	3-4	3-4	3-4	3-4	3-4	-	-	-
1300	4	4	3-4	4	3-4	3-4	3-4	3	3-4	3-4	3-4	3

Sampling Station		Sampling Station	
No.	Location	No.	Location
0100	Br in Milford	0700	Br nr Killaready
0200	Br 3.2 km d/s Milford Br	0800	Grange Br
0300	Broken Br	0900	Br d/s Grange Br
0400	Br nr Balliniska	1000	Palatine Br
0500	0.8 km u/s Castlemahon Br	1100	Rathkeale Br
0600	D/s Castlemahon Br	1200	Ford d/s Rathkeale Br
		1300	Kilcool Br

Assessment: Improved to satisfactory at three locations which is the best quality status for the river since the mid-1970s. However, the Deel remains mostly unsatisfactory due to extensive moderate and slight pollution. Suspected agricultural wastes are affecting quality throughout the river length but sewage (at 0300, 0800, 1100) and industrial (at 0600, 0700) sources are also implicated. Just prior to survey, the river had been cleared and banks reinforced (meshed wire and stones) at the first location, in Milford (0100), where low species richness, due to disturbance and siltation, was recorded. Overall, there was improvement at five of the 11 locations examined, with the final site, at Kilcool (1300), the only one to show deterioration, from slight to moderate pollution, since the previous survey.

*Silt effects

River and Code : **FLEMINGSTOWN STREAM** **24/F/03**
 Tributary of : Loobagh OS Catchment No: 155
 OS Grid Ref : R 638 263 Date(s) Surveyed : 20/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)			
	1994	1996	1999	2002
0500 Gotoon Br	4	4	4	4

Assessment: Satisfactory at the only location sampled with no apparent change compared with three previous surveys. The crayfish, a protected species, lives in this stream.

River and Code : **GLENCORBRY** **24/G/03**
 Tributary of : Sea - Shannon Estuary OS Catchment No: 155
 OS Grid Ref : R 131 475 Date(s) Surveyed : 17/07/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1988	1994	1996	1999	2002
0200 Br d/s Br NE of Tullyleague	-	3-4	4	3-4	4
0400 Upstream Br, Glin	4	3	3	3-4	3-4

Assessment: The Glencorbry, or Glencorbly, River showed improvement, to satisfactory conditions, since previous survey, at the first of the two locations (0200) examined.

River and Code : **GREANAGH** **24/G/05**
 Tributary of : Maigue OS Catchment No: 155
 OS Grid Ref : R 463 477 Date(s) Surveyed : 18/07/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1988	1993	1996	1999	2002
0600 Coolah Br	3-4	3-4	3	3	3

Assessment: Continuing unsatisfactory. Moderately polluted, by suspected agricultural sources, where surveyed. Also called Greananagh - a variation of Grenagh.

River and Code : **LISMAKEERY STREAM** **24/L/03**
Tributary of : Sea - Shannon Estuary OS Catchment No: 155
OS Grid Ref : R 324 520 Date(s) Surveyed : 23/08/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)			
	1993	1996	1999	2002
0600 Br ESE of Tomdeely	3-4	3	3	3

Assessment: Again only moderate ecological quality at the one sample location where the river substratum is largely calcified.

River and Code : **LOOBAGH** **24/L/01**
Tributary of : Maigue OS Catchment No: 155
OS Grid Ref : R 545 278 Date(s) Surveyed : 19/09/02

Stations No.	Biological Quality Ratings (Q Values)										
	1971	1976	1978	1980	1982	1986	1988	1994	1996	1999	2002
0200	-	-	4	4	-	4	4	4	4	4	4
0300	5	4-5	3-4	4	4	4	4	4-5	4-5	4	4
0400	4	4-5	3-4	3-4	3-4	3-4	3-4	3	2-3	3	2
0500	4-5	4-5	3-4	3-4	3-4	3-4	3-4	4	3	3-4	3
0510	4-5	4-5	3-4	3-4	3-4	3-4	3-4	3	3	3-4	3
0600	4-5	4	3-4	3-4	3-4	3-4	4	4	3-4	4	4

Sampling Station		Sampling Station	
No.	Location	No.	Location
0200	Ballinanima Br	0500	Br N of Kilbreedy (LHS)
0300	Riversfield Br	0510	Br N of Kilbreedy (RHS)
0400	North Br, d/s Kilmallock	0600	Garroose Br

Assessment: Deterioration, to serious and moderate pollution respectively, at Kilmallock (0400) and Kilbreedy (0500, 0510) due to sewage discharges. Satisfactory and unchanged at the other three locations. The crayfish, a protected species, lives throughout most of the length of the Loobagh River.

River and Code : **MAIGUE**
 Tributary of : Sea - Shannon Estuary
 OS Grid Ref : R 456 568

24/M/01
 OS Catchment No: 155
 Date(s) Surveyed : 18/09/02

Stations No.	Biological Quality Ratings (Q Values)										
	1971	1974	1976	1978	1981	1984	1988	1994	1996	1999	2002
0020	-	-	-	-	-	-	-	3	3	2-3	3
0050	-	-	-	-	-	-	3	3	3	3	3
0100	4-5	4	-	-	-	4	3-4	-	-	-	-
0200	3	3	4	3-4	-	3-4	3-4	3	3	3-4	3-4
0300	2-3	3	3	3	-	3-4	3-4	3	3	3	3-4
0400	4	4	4	4	-	3-4	3-4	3-4	3	3	3-4
0500	4-5	4	-	4	3-4	3-4	3-4	3-4	3	3-4	3-4
0600	4	4	-	4	3-4	3-4	3-4	-	-	-	-
0700	4	4	-	4	4	4	4	3-4	3	3	3-4
0900	4-5	4	-	4	3-4	3-4	3-4	3-4	3	3	3-4

Sampling Station
 No. Location
 0020 Br u/s Ballybane Br
 0050 Fort Br
 0100 Fort Br East
 0200 Creggane Br
 0300 Bruree Br

Sampling Station
 No. Location
 0400 Howardstown Br
 0500 Br nr Rosstemple Station
 0600 Cherrygrove Br
 0700 Br in Croom
 0900 Castleroberts Br

Assessment: Continuing unsatisfactory throughout due to widespread slight pollution and some moderate pollution; representing a change in status, from moderate to slight pollution, at half of the eight locations examined. Some bank clearance and reinforcement work being carried out, at time of survey, on left-hand side of river immediately upstream of Howardstown Bridge (0400). The protected crayfish continues to survive in the middle and lower reaches of the Maigne.

River and Code : **MORNINGSTAR** 24/M/02
Tributary of : Maigue OS Catchment No: 155
OS Grid Ref : R 538 334 Date(s) Surveyed : 19/07/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)							
	1976	1981	1986	1988	1993	1996	1999	2002
0200 Br W of Pinker's Cross	-	4	3-4	3-4	4	4	4	4
0300 Ballynahinch Br	-	4	3	3-4	3-4	3	3-4	4
0400 Gormanstown Br	-	4	3	3-4	3-4	3-4	3-4	3-4
0500 Ballyvolane Br	-	4	4	3-4	3-4	4	4	3-4
0600 Br 1.5 km d/s Bruff	-	4	3-4	3-4	4	4	4	3-4
0650 SW of Carrigeen	-	-	-	-	-	3-4	4	3-4
0700 Athlacca Br	4	3-4	4	3-4	3-4	-	-	-
0800 Br 2 km d/s Athlacca	-	3-4	4	3-4	3-4	4	3-4	3-4

Assessment: Enriched throughout with large growths of filamentous algae at all but the two upper locations (0200, 0300). The protected crayfish survives in most parts of the Morningstar.

River and Code : **OWVANE (LIMERICK)** 24/O/02
Tributary of : Sea - Shannon Estuary OS Catchment No: 155
OS Grid Ref : R 192 498 Date(s) Surveyed : 19/07/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)								
	1971	1975	1979	1986	1988	1994	1996	1999	2002
West Branch									
0040 Br u/s Cloonlahard Br	-	-	-	-	-	4	4	4	4
Main Channel									
0070 (East) Br S of Gortadroma ¹	-	-	-	-	-	-	-	4-5	4
0075 (West) Br S of Gortadroma ¹	-	-	-	-	-	3-4	3-4	4	4
0090 Br u/s Ballyhahill Br	-	-	-	-	4	4	4	4	4
0100 Ballyhahill Br	5	4-5	4-5	4-5	3-4	-	-	-	-
0120 0.5km d/s Ballyhahill Br	-	-	-	-	-	4	3-4	4	3-4
0200 Br u/s (SE of) Loughill	5	4-5	4-5	4	3-4	4	3-4	4	4

Assessment: Also known as the White River. Satisfactory at all but the penultimate location (0120) where slightly polluted due to suspected treated sewage discharges. The Gortadroma Landfill is situated between Stations 0070 and 0075.

¹ The upper reaches of the Owvane river (0070, 0075) are not shown on the Ordnance Survey Catchment Map.

River and Code : **SHANAGOLDEN STREAM** 24/S/02
 Tributary of : Sea - Shannon Estuary OS Catchment No: 155
 OS Grid Ref : R 270 500 Date(s) Surveyed : 23/08/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1989	1994	1996	1999	2002
<i>Middle Branch</i>					
1000 Br W of Tiermore Ho	2	2-3	2-3	2-3	3
<i>West Branch</i>					
1700 Br S of Shanagolden	-	4	3-4	3	3
<i>Main Channel</i>					
2000 Br NW of Stokesfield	3	3-4	4	4	3-4*

Assessment: Unsatisfactory throughout following deterioration, since previous survey, on main channel; caused by work on gas pipeline construction being undertaken, immediately upstream of sample location (2000), leading to turbidity and siltation. Continuing moderately polluted on both branches due again to suspected farm wastes (1000) and septic tank discharges (1700).

*Silt effects

River and Code : **TARBERT STREAM** 24/T/01
 Tributary of : Sea - Shannon Estuary OS Catchment No: 155
 OS Grid Ref : R 071 477 Date(s) Surveyed : 17/07/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)			
	1994	1996	1999	2002
0100 (West) Br in Tarbert	3-4	3	3	3

Assessment: Continuing unsatisfactory with moderate pollution again recorded in Tarbert. What looks like a septic-tank soakaway reaches the river 30 m upstream of bridge on right-hand side.

HYDROMETRIC AREA 25 (Part) Lower Shannon

Annagh (Tipperary)	25A02	Golden Grove Stream	25G06
Ardcloony	25A03	Gorragh	25G09
Ardcrony Stream	25A06	Gortnageragh	25G03
Ardgregane Stream	25A04	Gortnagowna	25G13
		Groody ¹	25G05
Ballintotty ¹	25B01		
Ballyfinboy	25B02	Killeengarriff	25K02
Ballynacarrig	25B18	Kilmastulla	25K04
Ballynagrenia Stream	25B16		
Ballyquiveen Stream	25B30	Little (Cloghan)	25L01
Bilboa	25B03	# Little Brosna	25L02
Blackwater (Clare)	25B06	Lorrha Stream	25L05
Blackwater (Shannonbridge)	25B27		
Boora	25B08	Moate Stream	25M05
Bow	25B10	Monaghanstown	25M01
Breaghmore	25B12	Mountrice	25M03
# Brosna	25B09	Mulkear (Limerick)	25M04
Bunow	25B25		
		Nenagh	25N01
Cahernahallia	25C01	Newport (Tipperary)	25N02
Camcor	25C02	Newtown	25N03
Cappawhite Stream	25C10		
Carrigahorrig Stream	25C16	Ollatrim	25O01
Cauteen	25C04		
Clareen Stream	25C13	Pallas	25P01
Clodiagh (Tullamore)	25C06	Pollagh Stream (Brosna)	25P05
County (Laois-Offaly)	25C21		
		Rock	25R02
Dead	25D01		
Derrainy	25D10	Shannon (Lower)	25S01
Derrycooly Stream	25D14	Silver (Kilcormac)	25S02
Dolla	25D08	Silver (Tullamore)	25S03
Doonane	25D04	Small	25S05
Durrow Abbey Stream	25D01	Syonan Castle Stream	25S04
Dysart Stream	25D05		
		Toem Steam	25T05
Gageborough	25G01	# Tullamore	25T03
Glashacloonaraveela	25G02		
Glenomra Wood Stream	25G12	# Yellow (Kilmastulla) ¹	25Y01
		Youghal	25Y02

Currently having seriously polluted stretches.

¹ Rivers shown thus are not National Baseline rivers as they do not appear on the Ordnance Survey Map entitled "Rivers and their Catchment basins."

Due to time constraints the following rivers were not surveyed; they will be surveyed in 2003:-

Ayle, Ballinlough Stream, Black (Ballyboy), Bleach, Cappagh, Cloghaun, Coos, Corra, Drumandoora, Drumkeary Stream, Duniry, Eyrecourt Stream, Graney, Kilcrow, Lisduff, Scarriff Stream, Woodford.

River and Code : **ANNAGH (TIPPERARY)** **25/A/02**
Tributary of : Killeengarriff OS Catchment No: 155
OS Grid Ref : R 685 578 Date(s) Surveyed : 19, 20/09/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)						
		1979	1983	1987	1993	1996	1999	2002
0040	Br u/s Inchinmathea Br	-	-	-	5	5	4-5	4-5
0100	Toorenbrien Br	5	5	5	4-5	4-5	4-5	4-5
0200	Charlotte's Br	5	5	5	5	4-5	4-5	4
0300	Ahacrossaun Br	5	5	5	5	4-5	4-5	4
0500	100m u/s Annagh Br	-	-	-	4	4	4-5	4-5

Assessment: Although conditions continued to be satisfactory in terms of macroinvertebrate composition there was evidence of ecological stress at several locations on the Annagh River in September 2002: considerable slime growths were observed at Stations 0040, 0200 and 0300 with heavy siltation also at 0040 and the effects of cattle manure and bed material removal at Toorenbrien Bridge (0100). Overall quality profile continues to decline.

River and Code : **ARDCLOONY** **25/A/03**
Tributary of : Parteen Reservoir OS Catchment No: 155
OS Grid Ref : R 674 674 Date(s) Surveyed : 27/09/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)					
		1984	1988	1994	1996	1999	2002
0100	Ballycorney Br (at Mill View)	-	5	-	5	5	5
0200	Ardcloony Br (nr Ardclony Ho)	5	5	4-5	-	-	-

Assessment: This is a rare example of an almost pristine stream and as such it deserves special attention as regards protection from pollution and in particular from slurry spreading: the adjoining field had been treated with slurry in 2002: this should be actively discouraged in the future.

River and Code : **ARDCRONY STREAM** **25/A/06**
Tributary of : Ballyfinboy OS Catchment No: 155
OS Grid Ref : R 903 935 Date(s) Surveyed : 11/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1993	1996	1999	2002
0500 Br u/s Ballyfinboy R	4	3-4	3-4	4-5	3-4

Assessment: The improvement recorded in 1999 had not been maintained and once again the stream showed all the signs of excessive eutrophication viz. massive weed growth and the virtual absence of the more sensitive macroinvertebrate species.

River and Code : **ARDGREGANE STREAM** **25/A/04**
Tributary of : Lough Derg OS Catchment No: 155
OS Grid Ref : R 826 794 Date(s) Surveyed : 17/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1993	1996	1999	2002
0100 Br S of Grallagh	-	-	3	3-4	3*
0400 Crannagh Br W of Ardgregane	3	3	3-4	4	3-4*

Assessment: As indicated by the excessive weed growth, the absence of sensitive macroinvertebrates, the depressed Dissolved Oxygen (DO) levels (76%) and the presence of considerable quantities of cattle manure, the upper reaches (0100) of this stream were in an unsatisfactory condition when surveyed in mid September 2002. The lower reaches (0400) were adversely impacted by heavy siltation and eutrophication. Quality has deteriorated at both locations since 1999. Overall condition – unsatisfactory.

* Heavy Siltation

River and Code : **BALLINTOTTY¹** **25/B/01**
Tributary of : Ollatrim OS Catchment No: 155
OS Grid Ref : R 895 790 Date(s) Surveyed : 12, 13/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1981	1984	1986	1987	1988	1993	2002
0100 Phillabean Br	3-4	-	4	4	-	3	3
0200 Br NE of Coolderry	3-4	3	3	3	-	-	-
0240 Br SE of Norwood	-	-	-	-	-	3	3-4
0300 Br u/s Ollatrim R confl	3-4	3	4-5	3-4	-	3	3-4

Assessment: When surveyed in September 2002 the Ballintotty river was assessed as moderately polluted by suspected sewage (smell of detergent) at Phillabean Bridge (0100) and then slightly polluted at the two surveyed locations downstream. As a result of dredging earlier in the year the river was very heavily silted at Station 0240; a large animal housing unit located on the river bank poses a potential threat to the river at this point.

¹ River does not appear on OS Rivers Catchment Map; not a national baseline river.

River and Code : **BALLYFINBOY** **25/B/02**
Tributary of : Lough Derg OS Catchment No: 155
OS Grid Ref : R 830 982 Date(s) Surveyed : 10, 11/09/2002

Stations No.	Biological Quality Ratings (Q Values)									
	1971	1974	1978	1982	1984	1987	1993	1996	1999	2002
0070	-	-	-	-	-	4-5	4	3-4	3-4	3-4
0100	5	4	4	4	3	3	3-4	3	3-4	3-4*
0250	-	-	-	-	-	-	-	-	-	4
0300	-	-	4-5	4-5	3-4	4-5	4	3	4	-
0400	5	4-5	4-5	4	-	4	4	Dry	4	3-4
0550	-	-	-	-	-	3-4	3-4	3	3-4	3
0600	4	4	3-4	4	4	3-4	4	3	3-4	3-4
0700	5	3-4	4	4-5	4	4	3-4	3	3-4	4
0800	4	4	4	4-5	-	4	3-4	3	4	3-4

Sampling Station
No. Location
0070 Br NW of Ballintemple Ho
0100 Townfield Br
0250 Br S of Modreeny
0300 Modreeny Br North
0400 Ballynavin Br

Sampling Station
No. Location
0550 Br in Borrisokane
0600 Br nr Ballyfinboy Castle
0700 Ballyhooney Br
0800 Br just u/s L Derg

BALLYFINBOY *Continued*

Assessment: This highly productive, hard-water river was assessed as being satisfactory at just two of the eight locations when surveyed in September 2002, a situation broadly similar to that recorded in 1999. The upper reaches (0070) were virtually devoid of sensitive macroinvertebrates previously found there and the river was very heavily silted in the sluggish reach above Cloughjordan (0100) and again at Borrisokane (0550) where conditions had worsened since 1999. Despite substratum damage by watering animals, conditions were satisfactory below Cloughjordan (0250) but the lower river (0600 and 0700) was virtually overgrown with the water weed (*Ranunculus* sp.) while filamentous algae (*Cladophora* sp.) were excessive in the reach just above Lough Derg (0800). Heavy calcification of the substratum is a typical symptom of eutrophication in hard water rivers and this was much in evidence at Ballynavin Bridge (0400) where the substratum was carpeted with petrified moss overlain with masses of algae at the time of this survey; a similar situation was found at the lowermost station (0800). The river appeared to have been recently dredged in the Ballyfinboy Castle area (0600) but nevertheless weed and algal growths had been re-established in considerable abundance, (DO at this point was 125%) a reflection of the very enhanced trophic status of this river.

* Heavy Siltation

River and Code : **BALLYNACARRIG** **25/B/18**
Tributary of : Silver (Kilcormac) OS Catchment No: 155
OS Grid Ref : N 247 130 Date(s) Surveyed : 02/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1993	1996	1999	2002
0100 Br u/s Silver R confl	4	4	3-4	4	3-4

Assessment: Excessive weed and siltation indicated less than satisfactory conditions in the Ballynacarrig stream in September 2002. Forestry just upstream.

River and Code : **BALLYNAGRENIA STREAM** **25/B/16**
Tributary of : Gageborough OS Catchment No: 155
OS Grid Ref : N 252 373 Date(s) Surveyed : 09/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1993	1996	1999	2002
0400 Br S of Rose Mount	3	3	2	3	3/0
0600 Br nr Newtown	4	4	3	3-4	3

Assessment: As indicated by the absence of sensitive macroinvertebrates and by the Dissolved Oxygen levels (just 75% at both locations) this stream was in an unsatisfactory condition at both locations surveyed in August 2002. Oil pollution was also noted in the Rosemount area (0400). Agriculture suspected.

River and Code : **BALLYQUIVEEN STREAM** **25/B/30**
Tributary of : Nenagh OS Catchment No: 155
OS Grid Ref : R 915 740 Date(s) Surveyed : 13/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)			
	1993	1996	1999	2002
0300 Br u/s Nenagh R confl	3-4	3-4	3-4	4

Assessment: Satisfactory ('Fair' quality) and improved since 1999. The fact that the adjoining field had been fenced off may have some bearing on the improvement recorded.

River and Code : **BILBOA** **25/B/03**
Tributary of : Dead OS Catchment No: 155
OS Grid Ref : R 763 478 Date(s) Surveyed : 23, 24/09/2002

Sampling Stations Biological Quality Ratings (Q Values)
No. Location **1979 1983 1987 1989 1993 1996 1999 2002**

Inch Branch

0004	Br SE of Loughbrack	-	-	-	4	3-4	4	3	3-4*
0008	Br u/s Main R confl	-	-	-	4	4	3-4	4	4

Main Channel

0010	Br in Kilcommon	-	-	4	-	3-4	3-4	3-4	3-4
0080	Bilboa Br u/s Blackboy Br	-	-	5	-	5	4-5	5	4-5
0300	Br 1.5 km d/s Cappamore	5	5	5	-	5	4	4-5	3-4
0400	New Br u/s Dead R	5	5	5	-	-	-	-	-
0500	Pullagh u/s Dead R	-	-	5	-	4-5	4	-	3-4*

Assessment: Conditions were assessed as satisfactory at just two of the six locations surveyed on the Bilboa river (0008 and 0080) in 2002. The upper reaches of the Inch Branch (0004) continued to be adversely affected by heavy siltation while the upper Main Channel was again slightly polluted by cattle manure at Kilcommon (0010). The most striking change recorded was downstream of Cappamore (0300) where the river was assessed as slightly polluted and highly eutrophic: this the first time such conditions have been recorded here. The lower river had almost fully recovered from the 1998 dredging in the Pullagh area (0500) but siltation remained excessive here and faunal imbalances indicated less than fully satisfactory conditions as yet.

* Heavy Siltation

River and Code : **BLACKWATER (CLARE)** **25/B/06**
Tributary of : Shannon OS Catchment No: 155
OS Grid Ref : R 609 587 Date(s) Surveyed : 26, 27/09/2002

Sampling Stations Biological Quality Ratings (Q Values)
No. Location **1984 1986 1988 1994 1996 1999 2002**

0030	Br SE of Cappanagh	-	-	5	5	-	4-5	3-4*
0120	Br d/s Killaly's Br	-	-	4-5	5	4	4	4-5
0180	Br nr Blackwater Mills	-	-	3	3-4	4-5	4	-
0250	Br SW of Mt St Catherine	4	4	-	4-5	4-5	4-5	4

Assessment: Continuing mostly satisfactory apart from the upper reaches (0030) where the stream had become very heavily silted and weedy since 1999. Quarrying operation upstream suspected. The river was not sampled at Blackwater Mills (0180) in 2002 because of lack of flow apparently as a result of damming below this point.

* Heavy Siltation

River and Code : **BLACKWATER (SHANNONBRIDGE) 25/B/27**
 Tributary of : Shannon OS Catchment No: 155
 OS Grid Ref : M 999 222 Date(s) Surveyed : 21/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1984	1988	1993	1996	1999	2002
0110 Br ENE of Derryharry	-	4-5	4	4	4	3-4
0200 Blackwater Br	3	3	3-4	3-4	3	3-4*

Assessment: Indications were of deteriorating quality in the upper reaches (0110) of the Blackwater where eutrophication appears to be increasing but the lower reaches (0200), although still significantly impacted by peat silt, have improved somewhat in recent years. Overall condition less than fully satisfactory.

* Heavy Siltation

River and Code : **BOORA 25/B/08**
 Tributary of : Brosna OS Catchment No: 155
 OS Grid Ref : N 164 242 Date(s) Surveyed : 22/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1984	1987	1988	1993	1996	1999	2002
0100 Gorteen Br	3	3	-	3-4	4	3	3-4*
0200 Aqueduct u/s Brosna R	-	2/0	4	3-4	4	3-4	3-4*

Assessment: Heavy siltation and depressed DO values (65% at 0100, 70% at 0200) indicated somewhat less than fully satisfactory conditions in the Boora in 2002.

* Heavy Siltation

River and Code : **BOW** **25/B/10**
Tributary of : Lough Derg OS Catchment No: 155
OS Grid Ref : R 678 847 Date(s) Surveyed : 27/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)							
	1975	1980	1984	1988	1993	1996	1999	2002
0100 Bow River Br	-	5	5	5	5	5	5	4-5
0200 Cloontymweenagh Br	5	5	4-5	5	5	3-4	4-5	4-5

Assessment: Satisfactory. Farm wastes pose a threat to water quality in the lower river (0200).

River and Code : **BREAGHMORE** **25/B/12**
Tributary of : Camcor OS Catchment No: 155
OS Grid Ref : N 142 056 Date(s) Surveyed : 04/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1987	1989	1993	1996	1999	2002
West Branch						
0020 Br nr Roscmore Cott	-	5	5	5	4-5	4
0080 Just u/s Main R confl	-	5	4	4	3-4	4
Main Channel						
0100 Aghagurty Br	5	-	5	5	4-5	5
0400 Breaghmore Br	5	-	4-5	4-5	4	4

Assessment: Although the Breaghmore River was 'satisfactory' at all points surveyed in 2002, the Q4 ('Fair quality') ratings recorded on the West Branch (0020, 0080) and lower Main Channel (0400) indicated increasing eutrophication in those areas. By contrast, the Q5 at Ahagurty Bridge (0100) indicates that the upper and middle reaches of the Main Channel continue to be of a highly satisfactory quality standard.

River and Code : **BROSNA**

25/B/09

Tributary of : Shannon

OS Catchment No: 155

OS Grid Ref : N 022 187

Date(s) Surveyed : 07, 20, 21/08/2002

Stations No.	Biological Quality Ratings (Q Values)									
	1971	1974	1978	1982	1984	1987	1993	1996	1999	2002
0005	-	-	-	-	3	3-4	3	3	3-4	3
0006	-	-	-	-	3-4	3	3	3	3	3
0040	-	-	-	-	3-4	2-3	3	3	3	3
0100	1	1	1-2	1-2	2-3	2	2-3	3	2-3	2
0200	4-5	4	3-4	4	4	4	3-4	3-4	3	3-4
0250	-	-	-	-	4	4-5	3-4	3-4	4	3-4
0400	4-5	4-5	4-5	4	4-5	4	3-4	3-4	4	3
0450	-	-	-	-	-	4	4	3-4	4	3
0500	4-5	4-5	4-5	-	-	4	4	3-4	3-4	3-4
0600	3-4	4	4	4	4	4	4	-	3-4	-
0700	4	4	-	4-5	4	4-5	3-4	3	3-4	3-4
0760	-	-	-	-	-	4	3-4	4	4	4
0800	4-5	4-5	4	-	4	5	3*	4	3	3-4*
0950	-	-	-	-	4-5	4-5	4	4	4	4-5
1000	4-5	5	4-5	4	3-4	4-5	3-4	3-4	3-4	3

Sampling Station
No. Location

Sampling Station
No. Location

Lough Owel Branch

0005 Br SW of Culleen Beg

0250 Br at Ballynagore

0400 Just d/s Kilbeggan Br

0450 Br near Lismoiny

Lough Sheever Branch

0006 Br d/s L Sheever

0500 Lehinch u/s Clara

0600 Bolart Br

0700 Ballycumber Br

0760 0.5km NW of Pollagh

Main Channel

0040 Mullingar: Indust Est Br

0800 Br nr Kilcolgan

0100 Butler's Br

0950 Ferbane Br

0200 Newell's Br

1000 Bellmount d/s Ferbane

Assessment:

The Brosna River was in a generally unsatisfactory quality condition in August 2002. The Lough Owel Branch was almost totally overgrown, was devoid of sensitive species and had a low oxygen concentration (50% saturation) at the point surveyed (0005) and although oxygen levels were higher in the Lough Sheever Branch (82% at Station 0006) it too was assessed as moderately polluted. As in 1999, the river continued to be moderately polluted in Mullingar (0040) but a marked deterioration was recorded downstream of the town (0100) where, despite very luxuriant weed growth, daytime DO was reduced to just 43% saturation and the fauna was dominated by the water hog-louse *Asellus*, conditions consistent with a serious degree of pollution. As indicated by the excessive weed growth and by the virtual absence

ROSNA Continued

of sensitive macroinvertebrates, the reach from Newell's Bridge (0200) to Ballynagore (0250) was assessed as slightly polluted/eutrophic and because of the complete absence of sensitive macroinvertebrates (which were formerly present in reasonable numbers) the reach from Kilbeggan (0400) to Lismoyny (0450) reflected moderately polluted conditions, a deterioration since 1999. Weedy and faunistically impoverished conditions indicated no change since 1999 in the eutrophic conditions upstream of Clara (0500) while at Ballycumber (0700) similar conditions were exacerbated by heavy substratum siltation. Satisfactory conditions were maintained in the Pollagh area (0760) but further downstream very heavy siltation (dredging ?) depressed the biotic index at Kilcolgan Bridge (0800). Despite considerable turbidity the presence of several sensitive macroinvertebrate species was indicative of satisfactory, and slightly improved conditions, at Ferbane Bridge (0950) but below this town at Belmont Bridge (1000) the complete absence of sensitive species indicated a further deterioration since 1999. In summary, the Brosna River was in a mostly unsatisfactory quality condition in August 2002; serious pollution, not seen since 1987, was again apparent below Mullingar sewage works and a marked deterioration was evident in and below Kilbeggan.

* Heavy Siltation

River and Code	: BUNOW	25/B/25
Tributary of	: Little Brosna	OS Catchment No: 155
OS Grid Ref	: S 106 924	Date(s) Surveyed : 05/09/2002

Stations No.	Biological Quality Ratings (Q Values)										
	1971	1973	1975	1981	1984	1986	1987	1993	1996	1999	2002
0050	-	-	-	-	-	-	-	4-5	4-5	3-4	4
0250	-	-	-	-	-	3	3	3	3	3-4	3
0400	2-3	2-3	2-3	3-4	3	3	3	3	3	3	3

Sampling Station
No. Location

0050 Br S of Killavilla Ho
0250 Br d/s Roscrea Railway Sta
0400 Bunow Br

Assessment: Satisfactory conditions have been restored in the reach upstream of Roscrea (0050) but no improvement was apparent in and below the town (0250, 0400), where indications of considerable pollution persist.

River and Code : **CAHERNAHALLIA** **25/C/01**
Tributary of : Dead OS Catchment No: 155
OS Grid Ref : R 814 468 Date(s) Surveyed : 24/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)							
	1979	1983	1987	1993	1996	1999	2002	
0010 Br N of Foildarg	-	-	4	3-4	4	3-4	-	
0025 Glengar Br	-	4	5	-	-	-	3-4	
0060 Cahernahallia Br	-	4-5	5	4	5	4-5	-	
0100 Br u/s Dead R confl	4	4	4-5	3-4	4	4	4	

Assessment: Considerable slime growths indicated somewhat less than satisfactory conditions in the upper Cahernahallia (0025) in September 2002 and although the lower reaches (0100) were quite heavily silted and weedy, quality was assessed as satisfactory because of the presence of considerable numbers of the more sensitive macroinvertebrate species in this area.

River and Code : **CAMCOR** **25/C/02**
Tributary of : Little Brosna OS Catchment No: 155
OS Grid Ref : N 052 054 Date(s) Surveyed : 03, 04/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)									
	1977	1981	1985	1987	1989	1993	1996	1999	2002	
West Branch										
0010 Br 3km E of Longford	-	-	-	-	-	5	5	5	5	
0080 Clonfosse Br (W of Kinnitty)	-	-	-	-	5	5	5	-	-	
0090 Wooden Br d/s Clonfosse Br	-	-	-	-	-	-	-	-	4-5	
Main Channel										
0100 Ford u/s Coneyburrow Br	-	5	5	5	-	5	5	5	5	
0200 Ford 1.5km N of Kinnitty	5	5	5	5	-	-	-	-	-	
0300 Drumcullen Br	-	5	5	5	-	4	3-4	4	3-4	
0500 Br S of Killyon	5	5	5	5	-	5	4	4	4	
0600 Br S of Clonbrone	5	5	5	4-5	-	4	4-5	3-4	4	
0700 Br at Elm Grove Birr	5	5	5	5	-	4	3-4	4	4	

Assessment: Water quality continued to be of a highly satisfactory standard in the upper reaches of the Camcor River in August 2002 but for most of its course quality was only 'Fair'. The reach below Kinnitty (0300) was polluted by suspected sewage discharges and cattle manure as well as impacts of dredging and removal of stones and gravel from the river bed. Bed material exploitation has previously been recorded in this area (in 1985 and 1993) as well as at Station 0100 (in 1987 and 1993) and again at Station 0600 (in 1985). Slurry spreading is also suspected as contributing to the overall mediocre quality of the middle and lower river in recent years. Remedial action is urgently needed if this river is not to go the way of so many other formerly high quality rivers throughout the country. The Camcor is the spawning ground and juvenile habitat for a unique type of brown trout, known locally as Cróneen, which migrate from Lough Derg each summer/autumn.

River and Code : **CAPPAWHITE STREAM** **25/C/10**
Tributary of : Dead OS Catchment No: 155
OS Grid Ref : R 841 456 Date(s) Surveyed : 24/09/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)								
		1979	1981	1983	1985	1987	1993	1996	1999	2002
0200	Gortandrum Br	3-4	3-4	3	3	3	3	3	3	3
0300	Ayle Br NE of Clonbrick	-	-	-	-	3	3	3	3	3*

Assessment: Sewage and cattle access are thought to be the most likely sources of the continuing (since 1983) unsatisfactory condition of this stream.

* Heavy Siltation

River and Code : **CARRIGAHORIG STREAM** **25/C/16**
Tributary of : Lough Derg OS Catchment No: 155
OS Grid Ref : M 894 022 Date(s) Surveyed : 10/09/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)				
		1987	1993	1996	1999	2002
0300	Br S of Milford Ho	4	3-4	3-4	4	3
0500	Br at Carrigahorig	3-4	3-4	3-4	3-4	3
0600	Br SE of Carrigahorig	4-5	3-4	3-4	3-4	3-4

Assessment: Hard waters such as this are particularly susceptible to even minor waste inputs and agricultural waste is suspected as causing the overall unsatisfactory condition of this stream: the lower reaches (0600) were adversely affected by the physical disturbance and by the polluting effects of manure from watering cattle in 2002.

River and Code	: CAUTEEN	25/C/04
Tributary of	: Dead	OS Catchment No: 155
OS Grid Ref	: R 840 457	Date(s) Surveyed : 24/09/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)				
		1987	1993	1996	1999	2002
0200	Br u/s Gortnacoolagh Br	3	3	3	3	3-4
0500	Cauteen Br (d/s side)	3	3	3	3	3-4

Assessment: Following some improvements, this relatively small stream was assessed as slightly polluted at both locations when surveyed in late September 2002. The substratum was badly churned up by watering animals at Station 0200.

River and Code	: CLAREEN STREAM	25/C/13
Tributary of	: Camcor	OS Catchment No: 155
OS Grid Ref	: N 122 048	Date(s) Surveyed : 04/09/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)				
		1987	1993	1996	1999	2002
0200	Br W of Grange Ho	3	4	3-4	4	4
0600	Br nr Kilmaine Ho	3-4	3-4	3-4	4	4

Assessment: Continuing satisfactory at both locations but a higher Q index would be achieved if cattle were to be kept out of the stream; a large dairy herd has access upstream of Station 0200. Also known as the Fuarawn River, this is a very hard water stream and as such is particularly sensitive to even minor waste inputs such as manure from watering animals.

River and Code : **CLODIAGH (TULLAMORE)** **25/C/06**
Tributary of : Brosna OS Catchment No: 155
OS Grid Ref : N 203 273 Date(s) Surveyed : 02/09/2002

Stations No.	Biological Quality Ratings (Q Values)										
	1971	1974	1975	1978	1982	1984	1987	1993	1996	1999	2002
0050	-	-	-	-	-	-	5	-	-	4-5	-
0090	-	-	-	-	-	-	-	-	-	-	4-5
0100	-	-	-	5	5	-	5	5	4-5	2/0	-
0220	-	-	-	-	-	-	3	3-4	3	3*	3-4*
0250	-	-	-	-	-	4-5	4	4-5	4	4-5	4-5
0300	-	-	-	5	5	5	4-5	5	4-5	4-5	4-5
0340	-	-	-	-	-	-	-	-	4	4	4
0400	5	5	5	5	4-5	4-5	4-5	4-5	4	3-4	3-4
0500	4	4	4	-	4	3-4	3-4	4	3-4	3-4	3-4

Sampling Station
No. Location

0050 Br NW of Scarroon
0090 u/s Clonaslee Waterworks
0100 Just u/s Clonaslee Br
0220 Just u/s Gorrage R confl
0250 Br ENE of Brockagh

Sampling Station
No. Location

0300 Gorteen Br
0340 Br N of Clonagh
0400 Annamoe Br
0500 Br at Rahan

Assessment: The Clodiagh River was in a mostly satisfactory condition when surveyed in 2002; the serious pollution recorded at Clonaslee in 1999 had abated but residual effects (abundant slime growths, heavy siltation) were still apparent at Station 0220: at the time of this survey a turbid brown discharge was observed entering the river upstream of this point (i.e., below the water treatment works). Satisfactory conditions were restored over the next six kilometres (Station 0250) and were maintained until impacted by suspected sewage discharges at Muckalagh (0400) where the river was distinctly eutrophic. A similar situation was apparent at Rahan (0500) where the river continued to be adversely affected by the seriously polluted waters of the Tullamore River.

River and Code : **COUNTY (LAOIS/OFFALY)** **25/C/21**
Tributary of : Silver (Kilcormac) OS Catchment No: 155
OS Grid Ref : N 238 113 Date(s) Surveyed : 02/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1993	1996	1999	2002
0200 County Br	4-5	4-5	4	4-5	4-5

Assessment: Continuing satisfactory despite considerable siltation in the slower flowing areas.

River and Code : **DEAD** **25/D/01**
Tributary of : Mulkear OS Catchment No: 155
OS Grid Ref : R 763 478 Date(s) Surveyed : 25/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)							
	1979	1981	1985	1987	1993	1996	1999	2002
0100 Pope's Br	3-4	4	3-4	3	3	3	3	3-4*
0200 Derraun Br	4-5	4-5	4	4	3-4	3	3	3-4*

Assessment: Has improved since 1999 but remains heavily silted and eutrophic. Unsatisfactory.
* Heavy Siltation

River and Code : **DERRAINY** **25/D/10**
Tributary of : Lough Alewnaghta OS Catchment No: 155
OS Grid Ref : R 755 911 Date(s) Surveyed : 27/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1982	1984	1987	1993	1996	1999	2002
0200 Br at Derrainy	4-5	3-4	5	5	4	4	4-5

Assessment: Satisfactory. This is an oligotrophic river and judging by the paucity of acid sensitive species (*B. rhodani* in particular) it may be somewhat acidified at times.

River and Code : **DERRYCOOLY STREAM** **25/D/13**
Tributary of : Clodiagh (Tullamore) OS Catchment No: 155
OS Grid Ref : N 219 270 Date(s) Surveyed : 225/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1989	1993	1996	1999	2002
0100 Br NE of Derrycooly	-	3-4	3-4	3	-
0200 Aqueduct u/s Clodiagh R	4	4	3-4	3-4	3*

Assessment: Deep deposits of peat silt and abundant duckweed (*L. minor*) and other emergent macrophytes indicate a considerable impact from peat extraction on this sluggish bog stream.

* Heavy Peat-Siltation

River and Code : **DOLLA** **25/D/08**
Tributary of : Nenagh OS Catchment No: 155
OS Grid Ref : R 882 742 Date(s) Surveyed : 13/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1993	1996	1999	2002
0400 Br u/s Nenagh R confl	4-5	4-5	4	4	4

Assessment: Enhanced algal growths (*Cladophora* sp.) indicate a degree of enrichment in the Dolla River but overall conditions remain satisfactory for the present.

River and Code : **DOONANE** **25/D/04**
Tributary of : Newport (Tipperary) OS Catchment No: 155
OS Grid Ref : R 778 651 Date(s) Surveyed : 19/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1993	1996	1999	2002
0010 Ford ENE of Toor	-	-	-	4-5	4-5
0200 Br u/s Newport R confl	5	5	5	4-5	4-5

Assessment: Continuing satisfactory despite signs of enrichment (i.e., slime and *Cladophora* growths) in the upper reaches (0010) and moderate siltation in Newport (0200).

River and Code : **DURROW ABBEY STREAM** **25/D/12**
 Tributary of : Silver (Tullamore) OS Catchment No: 155
 OS Grid Ref : N 296 286 Date(s) Surveyed : 22/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1989	1993	1996	1999	2002
0200 Br u/s Silver R	3-4	3-4	3	2-3	3

Assessment: The total absence of sensitive species is indicative of unsatisfactory conditions in this stream. High conductivity values (620 µs/cm) indicate possible groundwater or other such input.

River and Code : **DYSART STREAM (LOUGH ENNELL)** **25/D/05**
 Tributary of : Lough Ennell OS Catchment No: 155
 OS Grid Ref : N 374 456 Date(s) Surveyed : 08/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1993	1996	1999	2002
0100 Br NW of Milltown	-	4-5	3	4	3*
0300 Br in Dysart	4	-	-	-	-
0400 Br u/s L Ennell	-	4-5	3-4	4	4

Assessment: Heavy siltation and widespread cattle access is suspected as the cause of the deterioration since 1999 in the upper Dysart Stream (0100). The lower reaches (0400) were heavily calcified indicating enriched, hard water but the presence of some sensitive macroinvertebrate species suggests a continuation of satisfactory quality conditions for the present at least.

*Heavy siltation.

River and Code : **GAGEBOROUGH** **25/G/01**
Tributary of : Brosna OS Catchment No: 155
OS Grid Ref : N 237 326 Date(s) Surveyed : 08/08/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)					
		1984	1989	1993	1996	1999	2002
0045	E of Bunanagh (roadside)	-	-	4	3-4	3-4	4
0100	Donore Br	4-5	4	4	3-4	3-4	3-4
0300	Gageborough Br S of Dunard	4-5	4	4	3-4	3-4	3-4
0500	Ballyboughlin Br u/s Brosna R confl 5	4-5	4-5	3-4	4	3-4	3-4

Assessment: The Gageborough is a naturally productive, hard water river and as such is particularly sensitive to artificial eutrophication. Although an improvement was recorded in the upper reaches (0045), heavy crops of *Cladophora* (the filamentous alga) and pronounced stream bed calcification indicated a degree of artificial enrichment at the remaining three locations surveyed in August 2002.

River and Code : **GLASHACLOONARAVEELA** **25/G/02**
Tributary of : Bilboa OS Catchment No: 155
OS Grid Ref : R 795 519 Date(s) Surveyed : 23/09/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)			
		1987	1993	1999	2002
0100	Br E of Crehaun	-	5	5	4-5
0500	Glasha Br u/s Bilboa R confl	5	5	4-5	4-5

Assessment: Continuing satisfactory despite the appearance of some slime growths at Station 0100.

River and Code : **GLENOMRA WOOD STREAM** **25/G/12**
 Tributary of : Blackwater (Clare) OS Catchment No: 155
 OS Grid Ref : R 598 646 Date(s) Surveyed : 26/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1988	1994	1996	1999	2002
0100 Br u/s Blackwater R confl	4	4-5	4-5	4-5	4

Assessment: Continuing satisfactory despite considerable siltation and moss growth at the location surveyed.

River and Code : **GOLDEN GROVE STREAM** **25/G/06**
 Tributary of : Little Brosna OS Catchment No: 155
 OS Grid Ref : S 107 904 Date(s) Surveyed : 05/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)									
	1981	1983	1985	1987	1988	1993	1996	1999	2002	
0040 d/s Br nr Ballybrit Castle	-	-	-	4-5	-	2-3	3-4	3-4	-	
0080 Br W of Laurel Hill	-	-	-	5	-	3-4	4	3-4	3	
0200 Just u/s Little Brosna R	2	1-2	2	2-3	2-3	2-3	2-3	3	3	

Assessment: This naturally productive, hard water stream was in an unsatisfactory condition at both locations surveyed in early September 2002: the upper reaches (Ballybrit Castle area) were overgrown and inaccessible at that time. The banks and substratum were severely damaged by watering cattle in Laurel Hill area (0080) where algal growths were excessive and the slower areas were heavily silted. Further downstream (0200) a reduced DO (72%) and relatively high numbers of pollution tolerant fauna (Tubificid worms) indicated some organic input, most likely from the nearby fish farm.

River and Code : **GORRAGH** **25/G/09**
Tributary of : Clodiagh (Tullamore) OS Catchment No: 155
OS Grid Ref : N 322 121 Date(s) Surveyed : 14/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1993	1996	1999	2002
0100 Ford W of Srahcullen	5	-	-	-	-
0200 Gorragh Br E of Clonaslee	-	4-5	4-5	4-5	5
0300 Killart Ho	5	-	-	-	-

Assessment: Continuing highly satisfactory.

River and Code : **GORTNAGERAGH** **25/G/03**
Tributary of : Bilboa OS Catchment No: 155
OS Grid Ref : R 826 526 Date(s) Surveyed : 23/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1993	1996	1999	2002
0200 Br SW of Foilycleary	-	4	4-5	4-5	4-5
0300 Br u/s Bilboa R confl	5	5	4-5	4-5	4-5

Assessment: A fish-kill due to a slurry/silage spill was reported in the upper reaches of the Gortnageragh on the evening of Friday, September 20th 2002 and several dead trout fingerling were observed at Station 0200 at the time of this investigation. It would appear that the pollution was of limited duration as considerable numbers of sensitive macroinvertebrates were found at both locations indicating that this was a “once-off” event. The fact that it occurred on a Friday evening, however, arouses some suspicion as to the “accidental” nature of the spillage.

River and Code : **GORTNAGOWNA** **25/G/13**
Tributary of : Nenagh OS Catchment No: 155
OS Grid Ref : S 957 690 Date(s) Surveyed : 16/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)			
	1993	1996	1999	2002
0300 Tooreagh Br	4-5	-	-	-
0400 Br u/s Cloghinch Old Br	-	4	4-5	4-5
0500 Cloghinch Old Br	4-5	-	-	-

Assessment: Continuing satisfactory.

River and Code : **GROODY¹** **25/G/05**
Tributary of : Shannon OS Catchment No: 155
OS Grid Ref : R 604 577 Date(s) Surveyed : 05/09/2002

Stations No.	Biological Quality Ratings (Q Values)									
	1971	1975	1979	1983	1985	1987	1993	1996	1999	2002
0100	4	4	4	4	3-4	3	3	3-4	3	3-4
0150	-	-	-	-	3-4	3	3	3	3	3
0200	4	4	4	4	3	3-4	3	3	3	3*

Sampling Station
No. Location
0100 Br 2km N of Caherconlish
0150 Killonan Br
0200 Br in Ballysimon

Assessment: Although devoid of sensitive species the Groody is little more than a drain at the first location (0100) and so it is not ideal for biological assessment; however, there were some indications of a degree of ecological impairment there e.g., heavy siltation and considerable growths of *Lemna minor* (Duckweed). Further downstream the river was assessed as moderately polluted at Killonan Bridge where there was a strong smell of sewage while at Ballysimon (0200) excessive siltation and filamentous algal growths indicated unsatisfactory conditions also.
* Heavy Siltation

¹ River does not appear on OS Rivers Catchment Map; not a national baseline river.

River and Code : **KILLEENGARRIFF** **25/K/02**
Tributary of : Mulkear (Limerick) OS Catchment No: 155
OS Grid Ref : R 678 539 Date(s) Surveyed : 20/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)									
	1971	1975	1979	1983	1987	1993	1996	1999	2002	
0100 Annagh Br	5	5	5	5	5	-	-	-	-	
0150 Br d/s Annagh Br	-	-	-	-	5	4-5	4-5	4-5	4	
0200 Barrington's Br	5	5	5	4	4-5	-	-	-	-	

Assessment: Relatively few sensitive macroinvertebrate species and enhanced growths of filamentous algae (*Vaucheria* sp.) indicate increasing enrichment of this river which was assessed as just about satisfactory in late September 2002. The river is heavily used by watering cattle at this point – something which is incompatible with optimum quality conditions and which needs to be addressed if this river is to retain its satisfactory status.

River and Code : **KILMASTULLA** **25/K/04**
Tributary of : Shannon OS Catchment No: 155
OS Grid Ref : R 697 697 Date(s) Surveyed : 18/09/2002

Stations No.	Biological Quality Ratings (Q Values)											
	1971	1974	1976	1978	1981	1983	1985	1987	1993	1996	1999	2002
0050	-	-	-	-	-	-	-	-	-	-	4	4
0100	4-5	4	4	3-4	-	3-4	3-4	4	4	-	-	3
0120	-	-	-	-	-	-	-	-	-	3	3-4	3-4
0300	-	3	2/0	1/0	3/0	3	-	3	-	-	-	3
0800	1/0	2	2-3	1/0	3/0	3-4	3/0	3-4	3/0	3/0	3*	3
0900	3-4	3-4	3/0	3/0	3/0	3-4	4	4	3/0	3-4	-	-
0910	-	-	-	-	-	-	-	-	-	-	3-4	3-4
1000	5	4-5	4	3-4	4	4	4-5	4-5	3/0	3-4	4	3-4

Sampling Station		Sampling Station	
No.	Location	No.	Location
0050	Silvermines Br	0800	Cranna Br (SW of Cranna Ho)
0100	Br d/s Silvermines Br	0900	Br NE of Cappadine
0120	Carrow Br (W of Srah Cottage)	0910	Br W of Cappadine
0300	u/s Yellow R confl	1000	Cool Br

Assessment: The Kilmastulla River was polluted to some degree over most of its length and as such it was in a mostly unsatisfactory quality condition in September 2002. Sewage from Silvermines village is suspected as causing the deterioration at Kilmore Bridge (0100) and of contributing to the continuing

eutrophication at Carrow Bridge (0120). Seepage/runoff from the vast mines tailings area is the most likely cause of the excessive weed and algal growth at Station 0300 and this combined with inflows from the Yellow River is the likely source of the heavy deposition of red coloured silt in the Cranna Bridge area (0800). The lower reaches are characterised by excessive growths of the blanket weed *Cladophora* a characteristic symptom of artificially excessive nutrient inputs.

River and Code : **LITTLE (CLOGHAN)** **25/L/01**
 Tributary of : Brosna OS Catchment No: 155
 OS Grid Ref : N 039 201 Date(s) Surveyed : 22/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)									
	1984	1986	1987	1988	1989	1993	1996	1999	2002	
0100 Crancreagh Br	1	2	2	2	2-3	2-3	-	2-3	-	
0200 Br 2km SW of Cloghan	1	3	3	-	-	3-4	4	3-4	3-4	
0400 Br u/s Brosna R confl	2	3	3	-	-	4	4	4	3-4*	

Assessment: The Little River was overgrown and virtually stagnant and, therefore, it was not sampled upstream of Cloghan at Crancreagh Bridge (0100) in August 2002: below this village (0200) an unbalanced bottom fauna indicated some slight pollution effects while the lower river (0400) was adversely affected by heavy deposits of peat-silt.

* Heavy Peat-Siltation

River and Code : **LITTLE BROSNA** **25/L/02**
 Tributary of : Shannon OS Catchment No: 155
 OS Grid Ref : M 947 128 Date(s) Surveyed : 05,06,09, 10/09/2002

Stations No.	Biological Quality Ratings (Q Values)										
	1971	1973	1975	1977	1981	1984	1987	1993	1996	1999	2002
0015	-	-	-	-	-	-	5	4	4	-	-
0016	-	-	-	-	-	-	-	-	-	4-5	4
0025	-	-	-	-	-	-	3-4	3-4	3	4-5	3-4
0027	-	-	-	-	-	4	4	3-4	3-4	4	4
0040	-	-	-	-	-	-	3-4	3-4	3	3	3
0052	-	-	-	-	-	-	4	3-4	3	4	3-4
0085	-	-	-	-	-	-	3-4	3-4	3	3-4	3
0100	5	5	5	5	4	4-5	3-4	3-4	4	4	3-4
0300	4	3-4	3-4	-	3-4	3-4	3-4	3	3	3	3-4
0400	-	-	-	4	4	4	4	3-4	3	3	3/0
0600	4	-	-	-	4-5	5	4-5	3-4	4	4	4
0700	5	4-5	-	4-5	4-5	4	4	3-4	3	4	3-4
0800	5	5	-	5	4	4	4-5	4	-	-	-
0810	-	-	-	-	-	-	-	-	3-4	3-4	3-4
0900	5	-	-	5	4	5	5	-	-	-	-
1000	-	-	-	-	4	4-5	5	3-4	3-4	3-4	3-4

Sampling Station
No. Location

Sampling Station
No. Location

Keeloge Branch

0015 Br E of Loughan
 0016 Br SW of Dunkerrin (Main Rd)
 0025 Br u/s Clonlisk Br
 0027 Br at Keeloge Cottage

Kilcomin Branch

0040 Br SW of Barna
 0052 Coolroe Br (1.6km u/s Kilcomin Br)
 0085 Br ESE of Kennes X-Rds

Main Channel

0100 Milltown Br (nr Mt Lucas)
 0300 1st Br d/s Bunow R confl
 0400 Br nr Brosna House (Drumakeenan)
 0600 Sharavoge Br (SW of S. Ho) (d/s on RHS)
 0700 Riverstown Br
 0800 Croghan Br
 0810 100m d/s Croghan Br
 0900 Derrinsallow Br (u/s side)
 1000 New Br

Assessment:

The Little Brosna was in a mostly unsatisfactory condition in September 2002 due to widespread intense eutrophication from suspected agriculture and more serious pollution from suspected sewage and other municipal discharges. Quality was nowhere better than 'Fair' (Q4) even in the uppermost reaches of the Keeloge Branch where conditions had been improving since 1996; at the time of this survey this branch had become very heavily silted at 0016 and excessively weedy at 0025 but it then recovered to a satisfactory condition before joining with the Main Channel. No such recovery was evident in the Kilcomin Branch, where conditions had deteriorated at each of the three surveyed locations since 1999. This branch was badly affected by manure from large numbers of watering cattle in the Barna and Coolroe areas (0040, 0052) while its lower reaches (0085) were hypertrophic and heavily silted. Similar

unsatisfactory conditions were also recorded at Milltown (0100) on the upper Main Channel below its confluence with this branch.

Following the relocation of the sewage and water treatment works discharges at Roscrea, conditions improved upstream of Station 0300 but, as a result of a plant breakdown in the week preceding this survey, the river was seriously polluted for a short distance downstream of these discharges and carryover effects were still apparent two kilometres downstream near Brosna House (0400); the Q3/0 at this location reflects a suspected residual toxic effect which may be related to a major spillage of alum at the treatment works in July 2001. Between this point and Sharavoge Bridge (0600) the river recovered to a satisfactory ('Fair') condition and this was maintained over the next 12 kilometres (approximately) to below Birr where the river, as in 1999, was assessed as slightly polluted. A complete absence of previously recorded sensitive macroinvertebrate species combined with luxuriant weed and algal growths and extreme substratum calcification at New Bridge (1000) pointed to a deterioration in water quality in the lowermost reaches since the previous survey.

River and Code	: LORRHA STREAM	25/L/05
Tributary of	: Lough Derg	OS Catchment No: 155
OS Grid Ref	: M 887 032	Date(s) Surveyed : 10/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1989	1993	1996	1999	2002
0200 Br SW of Lorrha	3	3	3-4	3-4	3
0300 Br d/s Friar's Lough	4	3	3	3	3

Assessment: Unsatisfactory. Moderately polluted at both locations surveyed in 2002. Agriculture suspected.

River and Code : **MOATE STREAM** **25/M/05**
Tributary of : Brosna OS Catchment No: 155
OS Grid Ref : N 226 325 Date(s) Surveyed : 20/08/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)								
		1984	1986	1987	1988	1989	1993	1996	1999	2002
0150	Br NW of Culleenagower	-	-	1	1	2-3	3	1	3	2-3
0300	Br S of Lurgan X-Rds	2	3	3	-	-	3	2	3	3
0400	Br nr Sheean Ho	3-4	4	3	-	-	3	3-4	3	4

Assessment: A significant improvement was recorded at Station 0400 in the lower reaches of this stream in August 2002; water quality was assessed as satisfactory at this location, a situation last recorded in 1986. The upper (0150) and middle (0300) reaches remain considerably polluted by suspected sewage discharges. The stream is also known as the Cloghatanny River.

River and Code : **MONAGHANSTOWN** **25/M/01**
Tributary of : Brosna OS Catchment No: 155
OS Grid Ref : N 381 432 Date(s) Surveyed : 07/08/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)				
		1987	1993	1996	1999	2002
0300	Br NNW of Monaghanstown	4	4	3-4	4	4
0500	Nure Br	4	4	3-4	4	3-4

Assessment: Continuing mostly satisfactory but excessive weed and algal growths at Nure Bridge indicate artificial eutrophication in the lower reaches.

River and Code : **MOUNTRICE** **25/M/03**
Tributary of : Blackwater (Clare) OS Catchment No: 155
OS Grid Ref : R 585 654 Date(s) Surveyed : 26/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1988	1994	1996	1999	2002
0300 Br u/s Blackwater R confl	4-5	5	4-5	4-5	4-5

Assessment: Continuing satisfactory. Siltation and algal growth becoming more noticeable.

River and Code : **MULKEAR (LIMERICK)** **25/M/04**
Tributary of : Shannon OS Catchment No: 155
OS Grid Ref : R 632 587 Date(s) Surveyed : 25/09/2002

Stations No.	Biological Quality Ratings (Q Values)									
	1971	1975	1979	1983	1986	1987	1993	1996	1999	2002
0100	5	5	5	4	4-5	5	4	4	4	4
0200	-	-	4-5	4	4-5	4-5	3-4*	3-4	3	4
0300	5	5	-	-	-	4-5	3	-	-	-
0400	-	-	5	5	-	5	-	4	4	4
0500	5	5	4-5	5	-	5	4	3-4	4	4-5
0590	-	-	-	-	-	5	4	3-4	4	4
0600	5	5	4-5	4-5	-	4-5	-	-	-	-

Sampling Station		Sampling Station	
No.	Location	No.	Location
0100	Dromkeen Br	0500	Ford d/s Killeengarriff R
0200	Brittas Br	0590	Annacotty Br d/s weir
0300	Br nr Abingdon Ho	0600	1km d/s Annacotty Br (LHS)
0400	2km d/s St 0300 (N of Boher at bend in road)		

Assessment: Although significantly improved at Brittas Bridge (0200) since 1999, water quality in the Mulkear River was generally no better than 'Fair' in September 2002. There were signs of enrichment throughout the river, but particularly in the uppermost (0100) and lowermost (0590) reaches.

River and Code : **NENAGH**
 Tributary of : Lough Derg
 OS Grid Ref : R 816 864

25/N/01
 OS Catchment No: 155
 Date(s) Surveyed : 12 to 17/09/2002

Stations No.	Biological Quality Ratings (Q Values)										
	1971	1974	1978	1981	1984	1986	1987	1993	1996	1999	2002
0050	-	-	-	-	-	-	4-5	4	4-5	3-4	4-5
0100	-	-	5	5	5	-	4-5	5	4-5	4-5	4
0200	-	-	5	5	4-5	-	4-5	5	4-5	4-5	4
0300	-	-	4	5	5	-	5	4-5	4	4-5	4-5
0400	-	-	-	5	4-5	5	4	-	4	4-5	4
0500	5	5	4-5	5	4	4-5	5	4-5	4	4-5	4
0550	-	-	-	-	-	4-5	4-5	3-4	3	4	3-4
0700	-	-	3-4	3-4	3-4	4	4-5	3-4	3-4	3-4	3-4
0800	-	-	4	4	4	-	3-4	3	3-4	3-4	3-4

Sampling Station
 No. Location

0050 Br NE of Ballyhane Cross
 0100 Cloghinch Br
 0200 Lacken Br
 0300 Ballysoilshaun Br
 0400 Ballynaclogh Br

Sampling Station
 No. Location

0500 Br nr Tyone Abbey
 0550 Bennett's Br
 0700 Br d/s Nenagh Br
 0800 Annaghbeg Br

Assessment:

A marked improvement was recorded in the uppermost reaches of the Nenagh River (0050) in September 2002 but elsewhere quality conditions were generally somewhat lower than in 1999. The river had become much more weedy upstream of Nenagh town where quality was generally no better than 'Fair' and it continued to show the symptoms of considerable artificial eutrophication over its course from the town to Lough Derg.

River and Code : **NEWPORT (TIPPERARY)** **25/N/02**
Tributary of : Killeengarriff OS Catchment No: 155
OS Grid Ref : R 685 578 Date(s) Surveyed : 17/09/2002

Stations No.	Biological Quality Ratings (Q Values)									
	1971	1975	1979	1981	1984	1987	1993	1996	1999	2002
0020	-	-	-	-	-	3-4	3-4	3-4	3-4	3-4*
0060	-	-	-	-	-	5	5	5	5	4-5
0080	-	-	-	-	-	5	5	5	5	4-5
0100	-	-	5	5	5	5	5	3-4	4-5	4-5
0200	5	5	5	5	5	5	5	3	3-4	3-4*
0300	5	5	5	4-5	5	5	5	-	-	-
0330	-	-	-	-	-	-	5	4	4-5	4
0400	-	-	5	5	5	5	-	-	-	-
0500	-	-	-	-	-	-	5	4	4-5	4

Sampling Station		Sampling Station	
No.	Location	No.	Location
0020	Br S of Curreeny Commons	0300	Portryan Br (1st Br d/s Newport)
0060	Br nr Glanculloo Old School	0330	Br S of Shower
0080	Br N of Coolruntha	0400	Br nr Bunkey Br
0100	Ford u/s Doonane R confl	0500	Just u/s Annagh R confl
0200	Rockvale Br nr Mackney		

Assessment: Continuing mostly satisfactory but the uppermost reaches (0020) were again adversely affected by cattle usage while suspected water treatment works effluents is thought to have been responsible for the characteristic silt-slime complexes infesting the river bed at Rockvale Bridge (0200).

* Heavy Siltation

River and Code : **NEWTOWN** **25/N/03**
Tributary of : Lough Derg OS Catchment No: 155
OS Grid Ref : R 802 826 Date(s) Surveyed : 17/09/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)					
		1985	1987	1993	1996	1999	2002
0100	Carrigmadden Br	5	5	5	4-5	4-5	4-5
0200	Newtown Br	5	5	5	3-4	4-5	4

Assessment: Continuing satisfactory. Enhanced filamentous algal growth (*Cladophora* sp.) at Newtown (0200) indicated increasing enrichment in the lower reaches of this Lough Derg feeder stream in September 2002.

River and Code : **OLLATRIM** **25/O/01**
Tributary of : Nenagh OS Catchment No: 155
OS Grid Ref : R 873 804 Date(s) Surveyed : 12/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1981	1984	1987	1993	1996	1999	2002
0040 Br SE of Ballybeg	-	-	3-4	3-4	3	3	3*
0080 Aghnameadle Br	-	-	4-5	3-4	3-4	3-4	3-4
0100 Ollatrim Br	5	4	4	4	-	-	-
0150 Br d/s Ollatrim Br	-	-	4-5	-	4	4	4
0200 Br SW of Millgrove Ho	5	3-4	3-4	4	-	-	-
0250 Br nr Riverlawn House	-	-	-	-	4	4	4
0300 Ford at Castle Willington	4	3-4	4	4-5	-	-	-
0400 Rathurles Br	4	4	4	3-4	3-4	3-4	3-4
0500 Gourdeen Br	5	3-4	4	-	-	-	-
0600 Br u/s Nenagh R confl	-	-	4-5	3-4	3-4	3-4	3-4

Assessment: The Ollatrim River was in an unsatisfactory condition in its upper and lower reaches and elsewhere quality was just 'Fair' at the time of this survey in September 2002. The continuing absence of sensitive macroinvertebrates and the excessive weed and algal growths indicated considerable enrichment upstream of Aghmore Bridge (0040) and the very heavy siltation at this point may be associated with quarrying activities in the immediate vicinity and possibly further upstream. Somewhat better conditions were recorded at Annaghmeadle Bridge (0080) despite damage to bed and banks by watering cattle at this point. Weed and/or algae were again excessive at Rathurles Bridge (0400) and just above the Nenagh River confluence (0600) where a DO saturation of 147% was recorded at the time of this survey.

* Heavy Siltation

River and Code : **PALLAS** **25/P/01**
Tributary of : Little Brosna OS Catchment No: 155
OS Grid Ref : M 998 095 Date(s) Surveyed : 10/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1993	1996	1999	2002
0300 Br SE of New Grove nr Holy Well	4-5	3-4	3	3	2-3
0500 Nr Church d/s Pallas Br	5	4	3-4	3	3

Assessment: This little stream remained in a distinctly unsatisfactory condition at both points surveyed in 2002. Domestic refuse was observed in the stream at Station 0300 where there was also a smell similar to human faeces while heavy usage by watering cattle was evident at the lower location.

River and Code : **POLLAGH STREAM (BROSNA)** **25/P/05**
 Tributary of : Brosna OS Catchment No: 155
 OS Grid Ref : N 189 257 Date(s) Surveyed : 21/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1989	1993	1996	1999	2002
0200 Br d/s Barony Br	5	4	4	3-4	-
0300 Br u/s Brosna R confl	4	3-4	4	3-4	4

Assessment: Despite considerable stream bed siltation and domestic refuse the presence of several sensitive macroinvertebrate species indicated an improvement to satisfactory water quality conditions in this stream in late August 2002.

River and Code : **ROCK (BIRR)** **25/R/02**
 Tributary of : Little Brosna OS Catchment No: 155
 OS Grid Ref : N 048 027 Date(s) Surveyed : 04/09/2002

Sampling Stations No. Location		Biological Quality Ratings (Q Values)				
		1984	1987	1993	1996	1999
0050 Br WNW of Killeenbreaghan Ho	3-4	4-5	4	4-5	3-4	3-4
0300 Aughnagann Ford	3	4	4	2	3	3

Assessment: Overall condition as in 1999 i.e., silted and eutrophic in upper reaches (0050), moderately polluted in lower (0300). Unsatisfactory, further improvement required. Small, hard-water streams such as this are very sensitive to even minor increases in nutrient input.

River and Code : **SHANNON (Lower)** **25/S/01**
Tributary of : Sea Shannon Estuary OS Catchment No: 155
OS Grid Ref : R 580 600 Date(s) Surveyed : 26/09/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)							
		1972	1984	1987	1990	1993	1996	1999	2002
2500	Castleconnell: World's End	4-5	4	4	4	3-4	3-4	3-4	4
2600	Athlunkard Br (d/s LHS)	-	4	4	4	3-4	3-4	3-4	3-4

Assessment: A considerable reduction in filamentous algal crops plus the appearance of the sensitive mayfly *Ecdyonurus* sp. (for the first time since surveys began) indicated a distinct improvement in quality at Castleconnell (2500) in 2002. The appearance of *Ephemera danica* at Athlunkard Bridge (2600) indicated that conditions had improved there also but excessive filamentous algal crops reflected continuing eutrophication in the city reach.

River and Code : **SILVER (KILCORMAC)** **25/S/02**
Tributary of : Brosna OS Catchment No: 155
OS Grid Ref : N 139 224 Date(s) Surveyed : 03/09/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)								
		1971	1974	1981	1984	1987	1993	1996	1999	2002
0100	Br at Cadamstown	-	-	5	5	5	4	4	4-5	4-5
0200	Ballynacarrig Br	-	-	5	5	4-5	3-4	4-5	4	4
0300	Br at Ballyboy	5	5	5	5	4-5	-	-	-	-
0320	East Br Kilcormac	-	-	-	-	-	3-4	3-4	3	3
0400	Br 1km d/s Kilcormac	4	4-5	4	3-4	3-4	3-4	3-4	4	-
0500	Wooden Br N of Aghagoogy	-	-	4	3-4	4	4	4	4	4-5
0700	Lumcloon Br	4-5	4	4	4-5	4	4	4	4	4

Assessment: With the exception of the stretch just upstream of Kilcormac (0320) where moderate pollution continued unabated, water quality was of a satisfactory standard in the Silver River in September 2002. Increasing siltation and calcification seems the most likely cause of the disappearance of the silt intolerant stoneflies *Perla* sp. and *Leuctra* sp. at Ballynacarrig Bridge (0200).

River and Code : **SILVER (TULLAMORE)** **25/S/03**
Tributary of : Clodiagh (Tullamore) OS Catchment No: 155
OS Grid Ref : N 245 269 Date(s) Surveyed : 22/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1984	1987	1993	1996	1999	2002
0055 Derrygolan Br (RH Chan)	-	4	4	4	3-4	-
0100 Gormagh Br	4-5	3-4	4	3	3	3*
0300 Br N of Aharney	4-5	4	4	4	4	3*
0400 Br E of Derries	4	4	-	-	-	-
0500 New Br u/s Clodiagh R confl	-	-	3-4	3	3-4	3-4

Assessment: The river was inaccessible at Derrygolan (0055) in 2002 but from the phenomenal weed growth observed it seems unlikely that there had been any improvement there since 1999. Neither was there any improvement at Gormagh Bridge (0100) where the river was again very heavily silted and also considerably impacted by watering cattle. Turbid waters, heavy siltation and the absence of sensitive species all pointed to a considerable deterioration in quality at Aharney Bridge (0300) and quality was only marginally better at New Bridge (0500) downstream. All in all an unsatisfactory river from the water quality aspect. Agriculture suspected.

* Heavy Siltation

River and Code : **SMALL (TIPPERARY)** **25/S/05**
Tributary of : Newport (Tipperary) OS Catchment No: 155
OS Grid Ref : R 726 623 Date(s) Surveyed : 19/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1979	1983	1987	1993	1996	1999	2002
0200 Br u/s Newport R confl	5	5	5	4	4-5	4-5	3-4*

Assessment: Turbid water, heavy bottom siltation and the presence of silt/slime complexes indicated less than satisfactory conditions in the lower reaches of the Small River in September 2002. Upstream quarrying or land disturbance suspected.

* Heavy siltation.

River and Code : **SYONAN CASTLE STREAM** **25/S/04**
Tributary of : Gageborough OS Catchment No: 155
OS Grid Ref : N 282 386 Date(s) Surveyed : 08/08/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)			
		1993	1996	1999	2002
0300	Br N of Lisnagree (W of Streamstown Ho)	4	4-5	3-4	3
0500	Br u/s Gageborough R confl	4	4	3-4	3-4

Assessment: This small stream was totally overgrown with the aquatic weed *Apium* sp. and it was devoid of sensitive macroinvertebrates and heavily silted in the Streamstown House area in August 2002 indicating a further deterioration here since 1999. The lower reaches (0500) were also silted and weedy and obviously over-enriched. Overall condition unsatisfactory and deteriorating.

River and Code : **TOEM STREAM** **25/T/05**
Tributary of : Dead OS Catchment No: 155
OS Grid Ref : R 840 455 Date(s) Surveyed : 24/09/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)				
		1987	1993	1996	1999	2002
0300	South Br at Toem	4	3-4	4	4	4
0600	Br u/s Dead R confl	4-5	4	4	4	4

Assessment: Continuing satisfactory despite cattle impact in lower reaches.

River and Code : **TULLAMORE** **25/T/03**
Tributary of : Clodiagh (Tullamore) OS Catchment No: 155
OS Grid Ref : N 280 254 Date(s) Surveyed : 23/08/2002

Stations No.	Biological Quality Ratings (Q Values)											
	1971	1975	1977	1981	1986	1987	1989	1990	1993	1996	1999	2002
0030	-	-	-	-	-	-	-	-	3	3	3	3
0100	4	3-4	3-4	4	4	3	-	-	4-5	3	3	3
0400	1-2	2	1-2	2	2	2	2-3	2-3	2-3	2-3	2	2

Sampling Station
No. Location
0030 Br d/s Geashill Stream
0100 Br S of Cappincur
0400 Br near Ballycowan Br

Assessment: The Tullamore river was again moderately polluted by suspected sewage below Geashill (0030) and there was no improvement at Cappincur (0100) some seven kilometres downstream. The situation below Tullamore was as in 1999 i.e., seriously polluted by suspected sewage: DO values recorded at the above locations were, respectively 91, 60 and 27 percent of saturation at the time of this survey.

River and Code : **YELLOW (KILMASTULLA)¹** **25/Y/01**
Tributary of : Kilmastulla OS Catchment No: 155
OS Grid Ref : R 800 200 Date(s) Surveyed : 18/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)							
	1974	1976	1978	1981	1983	1985	1987	2002
0100 Silvermines stream	1	1/0	1/0	1/0	-	3/0	1/0	1/0
0200 Yellow Br u/s St 0100	3/0	2/0	1/0	1/0	3	3-4	3/0	3/0
0300 Yellow Br d/s St 0100	1/0	1/0	1/0	1/0	3	3/0	3/0	3/0

Assessment: The Yellow River was significantly impacted by suspected toxic pollution both upstream and downstream of the Silvermines (Garryard) Stream (0100) which was itself seriously polluted by toxic mine wastes and by a septic tank effluent at the time of this survey in mid September 2002.

¹ River does not appear on OS Rivers Catchment Map; not a national baseline river.

River and Code : **YOUGHAL (TIPPERARY)** **25/Y/02**
Tributary of : Lough Derg OS Catchment No: 155
OS Grid Ref : R 798 827 Date(s) Surveyed : 17/09/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)						
		1982	1985	1987	1993	1996	1999	2002
0050	Br N of Curragh	-	4-5	3	4	3	3-4	3-4*
0200	Br at Youghal	5	5	5	4	4	4-5	4-5

Assessment: Heavy siltation and luxuriant weed growth pointed to some ecological disturbance in the upper reaches of the Youghal River but the lower reaches continued to support a diverse assemblage of sensitive macroinvertebrates indicating the continuance of satisfactory quality conditions in that area.

* Heavy Siltation

HYDROMETRIC AREA NO. 26

Upper Shannon

Aghnashannagh Stream	26A11	# Jiggy (Hind)	26J01
Ahascragh	26A01		
Anaderryboy	26A03	Killaclare Stream	26K061
Arderry Stream	26A10	Killadiskert	26K16
Arigna	26A02	Killeglan	26K04
		Killian	26K01
Ballinure	26B01	Killukin	26K02
Ballydangan	26B14	Kilmacricard	26K17
Black (South Leitrim)	26B04	Kilmactranny	26K03
Black (Westmeath)	26B05	Kinard	26K07
Boleybaun	26B30		
Boor	26B07	Laurencetown Stream	26L07
Boyle	26B08	Lenamore Stream	26L06
Breedoge	26B09	Lisdaly Stream	26L02
Breensford	26B10	Lissaphobble	26L04
		Lissydaly Stream	26L10
		Lung	26L03
Camlin	26C01		
Carricknabraher	26C02		
Castlegar	26C03	Mantua	26M13
Clogher (Roscommon)	26C18	Mihanboy	26M04
Clooncose Stream	26C20	[Mountain (Roscommon)]	[26M03]
Cloone	26C05	Mountnugent	26M02
Clooneigh	26C06		
Cloonfower Stream	26C21	Owengar (Leitrim)	26O02
Comoge	26C12	Owenmore (Glengevlin)	26O03
Creelaghta	26C22	Owennaforeesha	26O04
Cross (Roscommon)	26C10	Owennayle	26O05
Cuilleen Stream	26C17	Owenur	26O06
Curraghmulmurry	26C44		
Curraghroe Stream	26C14	Rath	26R01
		Relagh	26R05
Derryhippoo	26D01	# Rhine	26R04
Derrymullan Stream	26D07	Rinn	26R02
Diffagher	26D02	Rocksavage	26R07
Dungolman	26D06		
		Scramoge	26S01
Eslin	26E01	Shad Lough Stream	26S13
		Shannon (Upper)	26S02
Fallan	26F01	Shiven (South)	26S03
Fardrumman Stream	26F06	Smaghraan	26S04
Feorish (Ballyfarnon)	26F02	Springfield	26S05
Feorish (Tarmonbarry)	26F03	Strokestown	26S08
Francis	26F05	Suck	26S07
Gaine	26G01	Tang	26T02
Glore (Westmeath)	26G02	Termon Stream	26T03
Hind	26H01	Yellow (Ballinaglera)	26Y01
		Yellow (Castlepollard)	26Y02
Inny	26I01		
Island	26I03		

= Having seriously polluted stretch(es) at the time of this survey.

Due to problems of access the Mountain (Roscommon) was not surveyed: it will be attempted in 2003.

River and Code : **AGHNASHANNAGH STREAM** **26/A/11**
 Tributary of : Camlin OS Catchment No: 155
 OS Grid Ref : N 227 812 Date(s) Surveyed : 15/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)			
	1992	1996	1999	2002
0300 Aghaward Br	-	5	4	4
0400 Br u/s Camlin R confl	4-5	Dry	-	-

Assessment: Some localised impact from cattle access depressed quality which was assessed as just "Fair" at Aghaward Bridge (0300) in July 2002.

River and Code : **AHASCRAUGH** **26/A/01**
 Tributary of : Suck OS Catchment No: 156
 OS Grid Ref : M 837 329 Date(s) Surveyed : 27/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)							
	1980	1983	1986	1987	1992	1996	1999	2002
0050 Annagh Bridge	4	3-4	4	4	3-4	4	4	3-4
0100 Cloonpee Bridge	3-4	3-4	4	4	4-5	4	4	3-4
0200 Island Bridge	5	4	4	4	3-4	3-4	4	4
0300 Ahascragh: West Bridge	4	4	3-4	3	3-4	4	-	-
0400 3 km d/s Ahascragh	3	3-4	4	3	3-4	4	4	3-4
0500 Bunowen Bridge	5	4	4	4	4	3	4	3

Assessment: The Ahsacragh river was quite eutrophic especially in the upper reaches (0050, 0100) with extensive mats of Cladophora present. This represents a significant deterioration in comparison with the 1999 and 1996 surveys. The middle section (0200) was satisfactory with no change since 1999. The lower section (0400, 0500) again showed signs of eutrophication (0400) and even reasonably heavy organic pollution (0500).

River and Code : **ANADERRYBOY** **26/A/03**
Tributary of : Lung (Figh Lough) OS Catchment No: 155
OS Grid Ref : M 604 887 Date(s) Surveyed : 17/07/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)						
		1981	1984	1987	1992	1996	1999	2002
0100	Cloonroe Bridge	5	5	4	4-5	4	4	4
0400	Bridge d/s Cloonagh Lough	5	5	4	5	4-5	4	4
0500	Cloontowart Bridge	5	5	4	4-5*	4-5	4	4-5
0600	Br SE Farmhill (Driney Br)	-	-	-	-	4-5	4	4-5

Assessment: The Annaderryboy river was in satisfactory condition over its length in July 2002. There was no discernible change in quality in the upper section (0100, 0400) in comparison with the previous 1999 survey. There are a number of NHA/SAC lakes and bogs in the upper catchment. The lower section was in good condition.

River and Code : **ARDERRY STREAM** **26/A/10**
Tributary of : Corranearry Stream OS Catchment No: 155
OS Grid Ref : H 155 023 Date(s) Surveyed : 03/07/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)			
		1992	1996	1999	2002
0300	Br NW of Killyfea	4	4	4	3-4
0500	Br u/s Corranearry Str confl	4	3-4	4	3-4

Assessment: Following further deterioration due to suspected agriculture this stream was slightly polluted at both locations surveyed in July 2002.

River and Code : **ARIGNA (ROSCOMMON)** **26/A/02**
Tributary of : Shannon OS Catchment No: 155
OS Grid Ref : G 962 125 Date(s) Surveyed : 12/09/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)					
		1984	1987	1992	1996	1999	2002
0100	At Altagowlan School	5	4	4-5	3	4	4-5
0200	Arigna: Derreenavoggy Bridge	3-4	3/0	3/0	3/0	3-4/0	4
0300	Mount Allen Bridge	3-4	4	3	4	3-4	4

Assessment: A big improvement was noted in the quality of the Arigna river, particularly in the area of the old mines (0200) where there was no indication of the previously recorded toxicity. The upper catchment is extensively afforested.

River and Code : **BALLINURE** **26/B/01**
Tributary of : Suck OS Catchment No: 156
OS Grid Ref : M 898 256 Date(s) Surveyed : 18/10/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)							
		1981	1983	1986	1987	1992	1996	1999	2002
0040	Bridge at Newcastle (N Bridge)	-	-	-	4	3-4	3-4	4	3
0100	Bridge W. of Aughrim	3-4	4-5	4	3	3-4	3-4	4	3-4
0200	Attibrassil Bridge (1" map)	4	4	4	4-5	4	4	4	4
0400	Br N. of Ballymanagh Lodge	3	4	3-4	3-4	3-4	3-4	3	3

Assessment: The upper Ballinure (0040, 0100) had deteriorated in quality since 1999. The middle section was again satisfactory (0200) but the lower reaches (0400) were moderately polluted once again. This is a rural catchment with a low population density and apart from the small village of Aughrim no significant communities of any size. The CORINE land use map shows the catchment as dominated by high productivity pastures. These are located on poorly drained peats and gleys in the upper portion and on well drained grey-brown podzols in the lower portion of the catchment. There is a large sheep population in the catchment and also reasonably high cattle numbers.

River and Code : **BALLYDANGAN** **26/B/14**
Tributary of : Shannon OS Catchment No: 155
OS Grid Ref : M 988 305 Date(s) Surveyed : 17/10/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1984	1987	1992	1999	2002
0100 Br at Corn Mill, Cappyuse	4	4	4	3-4	3-4

Assessment: The Ballydangan river was again slightly polluted (eutrophic) at station 0100 in mid-October 2002.

River and Code : **BLACK (SOUTH LEITRIM)** **26/B/04**
Tributary of : Rinn OS Catchment No: 155
OS Grid Ref : N 101 874 Date(s) Surveyed : 11/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1980	1984	1987	1992	1996	1999	2002
0080 Br SW of Ballinamuck	-	-	5	3	3-4	4	4-5
0100 Br nr Breanriscullew	5	5	5	4	4	4	4-5
0200 Bellantra Br	5	4-5	5	4	4-5	4-5	4-5
0300 Br u/s Rinn R confl	5	5	5	4-5	4-5	4-5	4-5

Assessment: This river was in a very satisfactory condition as regards water quality in July 2002.

River and Code : **BLACK (WESTMEATH)** **26/B/05**
Tributary of : Lough Iron OS Catchment No: 155
OS Grid Ref : N 335 636 Date(s) Surveyed : 16/07/2002

Stations No.	Biological Quality Ratings (Q Values)													
	1977	1980	1982	1984	1986	1987	1988	1989	1990	1992	1994	1996	1999	2002
0045	-	-	-	-	-	1-2	1	1-2	1	1	1	1	1	3
0100	-	3-4	1	1-2	2	2	2	1-2	2	1-2	1-2	2	2-3	2-3
0180	-	-	-	-	-	3-4	-	-	1	3	-	3	3	3
0300	3	4	4	3	3	4	-	-	-	3	-	-	-	-
0400	-	-	-	-	-	-	-	-	-	-	-	3-4	3-4	3-4

Sampling Station		Sampling Station	
No.	Location	No.	Location
0045	Ballymahon Rd Br Edgeworthstown	0300	Br u/s Lough Iron
0100	Br nr Ballinlaghta	0400	250m d/s Br u/s L Iron
0180	5th Br d/s St 0100		

Assessment: A marked improvement was recorded in the upper reaches of the Black River (0045) in mid July 2002: serious pollution, on record since 1987, had abated at this location but fully satisfactory conditions will require some further improvement. The situation downstream of the town at Ballinlaghta (0100), was somewhat worse than that recorded in 1999, however. The river was quite heavily polluted at this point and for the remainder of its course was in a similarly unsatisfactory condition to that recorded in 1999. In summary, despite a considerable improvement in water quality upstream of Edgeworthstown the Black River continues to be in an unsatisfactory condition at all points surveyed.

River and Code : **BOLEYBAUN STREAM[#]** **26/B/30**
Tributary of : Diffagher OS Catchment No: 155
OS Grid Ref : G 909 261 Date(s) Surveyed : 12/09/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)				
		1987	1992	1996	1999	2002
0400	Br 2 km u/s confl with Main Channel	3-4	4-5	4-5	4-5	4

Assessment: The Boleybaun Stream was in satisfactory condition.
[#]This stream was formerly reported as the Boleybaun branch of the Diffagher (26D02).

River and Code : **BOOR** **26/B/07**
Tributary of : Shannon OS Catchment No: 155
OS Grid Ref : N 053 345 Date(s) Surveyed : 18/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1988	1992	1996	1999	2002
0600 Br near Castledaly Chapel	3	4	3	3	-
0900 Br u/s Br nr Newbridge Mill	-	-	-	-	3-4
1100 Br NW of Kilbillaghan	4	4	4	-	-
1200 Br NW of Ballynahownwood	-	-	-	-	4

Assessment: The middle reaches of the Boor River (0900) were adversely affected by eutrophication and siltation in July 2002 and the lower reaches (1200), though still suffering the ecological effects of the drainage of 1999, were in a satisfactory condition as regards water quality.

River and Code : **BOYLE** **26/B/08**
Tributary of : Drumharlow Lough OS Catchment No: 155
OS Grid Ref : G 927 020 Date(s) Surveyed : 01/10/02

Stations No.	Biological Quality Ratings (Q Values)									
	1971	1974	1978	1980	1983	1987	1992	1996	1999	2002
0100	-	-	-	5	4	4-5	4	4	4	4
0200	5	5	5	5	4-5	4-5	4	4	4	4-5
0400	5	-	3-4	3-4	4	4	4	4	4	4
0500	-	-	-	-	-	-	3-4	4	3-4	4-5
0600	5	5	-	5	4-5	-	4	4	4	4

Sampling Station No. Location	Sampling Station No. Location
0100 Cuppanagh Bridge	0400 Drum Bridge (Boat House Ford)
0200 Footbridge 1.8 km u/s Boyle	0500 Knockvicar Bridge
	0600 Cootehall Bridge

Assessment: Large numbers of zebra mussels were observed in the upper Boyle River (0100) indicating that this invasive species has spread to Lough Gara. Upstream of Boyle town (0200) water quality had improved since 1999 with less evidence of siltation and more pollution-sensitive species found. No change in quality was noted downstream of the town (0400) but a significant improvement was noted downstream of Lough Key (0500) in comparison with 1999. The lower section downstream of Oakport Lough was satisfactory with no change since 1999. Zebra mussels were again found at both sites downstream of Lough Key. It may be still too early to make a definitive statement about their impact on the faunal communities but at Station 0100 in particular little change is noted in the faunal composition relative to what it was 20 years previously - apart from the large numbers of zebra mussel present.

River and Code : **BREEDOGE** **26/B/09**
Tributary of : Lough Gara OS Catchment No: 155
OS Grid Ref : M 725 960 Date(s) Surveyed : 11/09/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)						
		1981	1983	1987	1992	1996	1999	2002
0100	Br 2 km E.S.E. of Frenchpark	3-4	4	-	4	3-4	4-5	4
0300	Bridge just S. of Breedoge	5	4	4	4	4-5	4	4

Assessment: The Breedoge River was in satisfactory condition at both sites sampled in September 2002.

River and Code : **BREENSFORD** **26/B/10**
Tributary of : Lough Ree OS Catchment No: 155
OS Grid Ref : N 073 444 Date(s) Surveyed : 18/07/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)					
		1984	1988	1992	1996	1999	2002
0100	Br u/s Twy Lough	4	4	3-4	3-4	3-4	3-4
0400	Br in Ballykeeran	4	5	4	3-4	3-4	3-4

Assessment: Over-enriched and faunistically impoverished. Unsatisfactory. No change.

River and Code : **CAMLIN** **26/C/01**
Tributary of : Shannon OS Catchment No: 155
OS Grid Ref : N 057 760 Date(s) Surveyed : 15, 16/07/2002

Stations No.	Biological Quality Ratings (Q Values)													
	1971	1973	1975	1977	1979	1981	1983	1985	1987	1989	1992	1996	1999	2002
0050	-	-	-	-	-	-	-	-	4	-	3-4	3-4	3-4	3-4
0100	-	-	-	-	-	4	4-5	4	4	-	-	-	-	-
0200	-	-	-	-	-	3-4	3-4	4	4-5	-	4	4	4	4
0300	4-5	4	4	3-4	3-4	3	3-4	3	3-4	-	3-4	-	-	-
0400	-	-	-	-	-	3-4	4-5	4-5	4-5	-	-	4-5	4	4
0600	4-5	-	-	-	-	4	4-5	4-5	4-5	-	4	3-4	3-4	4-5
0700	-	4-5	4-5	4	4	5	4-5	4-5	4-5	-	4	4	4	4-5
0800	-	-	-	-	-	4	4-5	4-5	4-5	-	3-4	3-4	4	4
0900	1	1	1	1	1	1	1	2	2	1	1	3	3-4	2-3
1000	1	1	1	1/0	1	1	1-2	2	3	1	1	3	3	2-3
1100	2-3	3-4	3	2-3	1-2	1-2	2	2	3	2	2-3	3	3	3

Sampling Station	
No.	Location
0050	Br d/s Cloonfin Lough
0100	Br u/s Ballinalee Br
0200	Ballinalee Br
0300	Soran Br
0400	Kilnacarrow Br
0600	Argar Br

Sampling Station	
No.	Location
0700	Br nr Kiltyreher
0800	The Mall Br Longford
0900	Br 1.8 km d/s Longford Br
1000	Br W of Lisnabo
1100	S Br Clondra

Assessment: The uppermost reaches of the Camlin River (0050) were again slightly polluted and eutrophic but, following a marked improvement at Argar/Ahaga Bridge (0600) water quality was satisfactory over most of its course to Longford. Downstream of the town there were indications of worsening conditions in the five kilometre stretch to Ballykenny Bridge (1000) and the river was again considerably polluted and hypertrophic at Clondra (1100) just one kilometre upstream of the Shannon confluence.

River and Code : **CARRICKNABRAHER** **26/C/02**
Tributary of : Breedoge/Owennaforesha OS Catchment No: 155
OS Grid Ref : M 762 902 Date(s) Surveyed : 11/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1980	1983	1987	1992	1996	1999	2002
0100 Cloonshanville Bridge	4	4	4-5	4	3-4	4	3-4
0200 U/s Owennaforesha River	3	4	-	3	3-4	3-4	3

Assessment: Water quality had deteriorated since 1999 at both sites surveyed in the Carricknabraher in 2002. The upper station (0100) is in a predominantly agricultural catchment and while much of the upstream catchment is not intensively farmed the combination of poorly drained gley and peat soils with some 35% of the catchment upstream of Stn 0100 under intensive pasture this may be contributing to the eutrophic condition of the river at Cloonshanville Bridge (0100). The lower Carricknabraher (0200) joins with the Owenaforsesha (qv) to form the Breedoge River (qv). This station (0200) on the Carricknabraher is significantly more polluted than the corresponding Owennaforesha station just upstream of the confluence where the two rivers join to form the Breedoge river. The town of Frenchpark is located in the Carricknabraher catchment and Bellanagare is located in the Owenaforsesha catchment.

River and Code : **CASTLEGAR** **26/C/03**
Tributary of : Shiven OS Catchment No: 156
OS Grid Ref : M 704 482 Date(s) Surveyed : 19/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)							
	1979	1981	1983	1987	1992	1996	1999	2002
0080 Bridge E.S.E. of Rahins	-	-	-	3	4	2-3	4	4
0100 Mountbellew Bridge	3	4	4	3	3-4	2-3	3	3
0200 Canavan's Bridge	2	3	4	3	3	3	3	3

Assessment: The Castlegar River was satisfactory in the upper section (0080) but once again highly eutrophic in (0100) and below (0200) Mountbellew. The catchment is grassland with 60% intensive pasture for cattle and sheep. Soils are mainly dry degraded grey-brown podzolics and a lesser amount of basin peat. Agricultural nutrient losses appear to be the dominant impact on the river.

River and Code : **CLOGHER (ROSCOMMON)** **26/C/18**
Tributary of : Lough Drumharlow OS Catchment No: 155
OS Grid Ref : G 895 015 Date(s) Surveyed : 01/10/02

No.	Location	Biological Quality Ratings (Q Values)						
		1989	1990	1991	1992	1996	1999	2002
0500	Br just d/s Clogher Lough	2	2-3	3	3	3	2-3	3

Assessment: The Clogher River was again moderately polluted downstream of Clogher Lake in October 2002.

River and Code : **CLOONCOOSE STREAM** **26/C/20**
Tributary of : Camlin OS Catchment No: 155
OS Grid Ref : N 140 770 Date(s) Surveyed : 15/07/2002

No.	Location	Biological Quality Ratings (Q Values)				
		1987	1992	1996	1999	2002
0300	Cartron Br NW of Lissavaddy	3	3	3-4	4	4
0500	Br u/s Camlin R confl	3	3-4	3	4	4

Assessment: Satisfactory. Becoming quite weedy at Cartron Bridge (0300) and cattle access poses a threat to water quality in the lower reaches (0500).

River and Code : **CLOONE** **26/C/05**
Tributary of : Lough Rinn OS Catchment No: 155
OS Grid Ref : N 109 941 Date(s) Surveyed : 03/07/2002

No.	Location	Biological Quality Ratings (Q Values)						
		1980	1984	1987	1992	1996	1999	2002
0100	Wooden Br SE of Tooma	4-5	4-5	5	4	4	4	4
0200	Br 1.5 km S of Cloone	4-5	3-4	5	4	-	-	-
0250	Br u/s Relagh R confl	-	-	-	-	4-5	4	4-5
0300	Br at Riverstown	4-5	4-5	4-5	-	-	-	-
0400	Lurga Br	5	5	5	4	4-5	4-5	4-5

Assessment: Satisfactory at all points surveyed in early July 2002 when the river was in flood.

River and Code : **CLOONEIGH** **26/C/06**
Tributary of : Lough Ree OS Catchment No: 155
OS Grid Ref : M 951 650 Date(s) Surveyed : 16/10/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1984	1987	1992	1996	1999	2002
0030 Br SW of Kilroosky	-	-	-	-	-	3-4
0040 Br SE Lisgobbin	-	-	-	4	3-4	-
0200 Clooneigh, of Derryturk	4	3-4	4	2-3	3	4

Assessment: The upper Clooneigh river was again slightly polluted (0030) but a significant improvement was recorded in the lower reaches (0200) in 2002. Land use in this sparsely populated catchment is predominantly high productivity pasture on grey-brown podzolic soils.

River and Code : **CLOONFLOWER STREAM** **26/C/21**
Tributary of : Suck OS Catchment No: 156
OS Grid Ref : M 623 814 Date(s) Surveyed : 31/07/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1989	1992	1996	1999	2002	
0200 Bridge in Cloonflower		4-5	4	3	3-4	4

Assessment: An improvement was noted in the water quality of the Cloonflower at the location surveyed in July 2002.

River and Code : **COMOGE** **26/C/12**
Tributary of : Glen Lough OS Catchment No: 157
OS Grid Ref : N 275 671 Date(s) Surveyed : 17/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1989	1992	1996	1999	2002
0700 Br u/s Glen Lough	4	4	3-4	4	4

Assessment: Satisfactory. No change.

River and Code : **CREELAGHTA** **26/C/22**
Tributary of : Black (South Leitrim) OS Catchment No: 155
OS Grid Ref : N 175 898 Date(s) Surveyed : 10/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1989	1992	1996	1999	2002
0500 Br N of Graigue	4-5	4	-	-	-
0800 Br NW of Carrowdrumman	-	-	4-5	4-5	4
0900 Br u/s Black R confl	4	4	-	-	-

Assessment: Continuing satisfactory despite increasing siltation at the location surveyed.

River and Code : **CROSS (ROSCOMMON)** **26/C/10**
Tributary of : Shannon OS Catchment No: 155
OS Grid Ref : N 004 393 Date(s) Surveyed : 16/10/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1984	1987	1992	1996	1999	2002
0060 Br E of Eskerbaun	-	-	-	4	4	3-4
0100 Bridge at Corrantotan	4	4	4-5	4	3-4	4
0200 Bridge at Burnbrook	4	4	3-4	4	4	4
0300 Bridge S. of Doyle's Bridge	4	4	3	3	3	3
0400 Bridge u/s Shannon River	4	4	4	4	flood	4

Assessment: The uppermost station sampled on the Cross River (0060) was apparently impacted by a groundwater flow which is relatively rich in nutrients. The upper catchment is almost entirely high productivity grassland devoted to cattle and sheep grazing. The river's middle section was in satisfactory condition (0100, 0200) although dissolved oxygen levels are suppressed due to groundwater influence. Downstream of the Athlone industrial estate (0300) the Cross was moderately polluted with no pollution-sensitive taxa found. A recovery was evident, however, upstream of the Shannon confluence (0400).

River and Code	: CUILLEEN STREAM	26/C/17
Tributary of	: Suck	OS Catchment No: 156
OS Grid Ref	: M 847 333	Date(s) Surveyed : 10/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1992	1996	1999	2002
0400 Bridge u/s Suck River confl.	4	4	4	4	4

Assessment: Although quality was not as good as it should be, the Cuilleen Stream was satisfactory where sampled in September 2002. There was some local siltation and cow dung deposits on the river bed, however, due to cattle accessing the river directly. This is likely to have an adverse impact especially during dry summers.

River and Code	: CURRAGHMULMURRY[#]	26/C/44
Tributary of	: Springfield	OS Catchment No: 156
OS Grid Ref	: M 668 644	Date(s) Surveyed : 01/08/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)							
	1981	1984	1987	1989	1992	1996	1999	2002
0050 Br E. of Curraghmulmurry	4	4	2	4	4-5	4	3	4

Assessment: Water quality had improved since 1999 in the Curraghmulmurry Stream.

[#]Formerly reported as Springfield River (26S05), South Branch.

River and Code : **CURRAGHROE STREAM** **26/C/15**
Tributary of : Feorish (Termonbarry) OS Catchment No: 155
OS Grid Ref : N 023 773 Date(s) Surveyed : 9/10/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)						
		1982	1986	1987	1992	1996	1999	2002
0100	Bridge S. of Curraghroe	-	4	4	-	3	2-3	3
0180	Br NW of Drinagh	-	-	-	-	-	-	3
0200	Bridge N. of Drinagh	4	4	4	3	2-3	3	-

Assessment: The Curraghroe Stream was polluted at both sites examined in September 2002. The catchment has gley soils in the upper portion and basin peats in the lower half. There are new forestry plantations in the upper catchment and grassland pasture accounts for approximately half the catchment's land use. Animal numbers in the catchment are relatively low based on the agricultural census for the area. Peat harvesting has a big impact on the river in the lower portion (0180) with extensive peat silt deposits noted on the river bed. The Curraghroe borders on an extensive bog that provides peat for the Lanesboro power station.

River and Code : **DERRYHIPPOO** **26/D/01**
Tributary of : Suck OS Catchment No: 156
OS Grid Ref : M 793 637 Date(s) Surveyed : 20/09/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)						
		1981	1984	1987	1992	1996	1999	2002
0100	Ballina Bridge	4	3	4	4	3	4	4
0200	Bridge at Loughnasaggart	4	4	4	4	4	4	3

Assessment: The Derryhippo was again satisfactory at both locations surveyed with little change in status.

River and Code : **DERRYMULLAN STREAM** **26/D/07**
Tributary of : Suck OS Catchment No: 156
OS Grid Ref : M 845 318 Date(s) Surveyed : 18/10/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1992	1996	1999	2002
0200 Bridge at Garrymore	-	3	3-4	4	4
0400 Kilmalaw Bridge	3	4	4	4	3-4
0500 Killure Bridge	3	4-5	4	4	4
0700 1st Bridge u/s Suck confl	-	4	4	4	4

Assessment: The upper Derrymullan (0200) was in satisfactory condition. The second station (0400) was in a eutrophic state as evidenced by significant quantities of filamentous algae. This is an intensively farmed catchment with large numbers of cattle and sheep. Kilconnell co-operative is also in the catchment upstream of Stn 0400. The soils in the catchment are predominantly dry soils (grey brown podzols) and the dominant land use is intensive pasture (93% pasture upstream of Stn 0400). The lower Derrymullan (0500, 0700) was satisfactory. This is a very hard water river and station 0500 in particular had been noted for its extensive liverwort cover - making it quite an unusual site from an ecological point of view. The liverworts have now all but disappeared from this location, however, with little recovery noted since 1996 when their decline was first noted.

River and Code : **DIFFAGHER** **26/D/02**
Tributary of : Lough Allen OS Catchment No: 155
OS Grid Ref : M 935 237 Date(s) Surveyed : 12/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1984	1987	1992	1996	1999	2002
0200 Cloonemeone Bridge	5	5	5	4-5	4-5	4-5

Assessment: The Diffagher was in satisfactory condition at the location surveyed in September 2002. (Note that what were formerly Boleybaun (26B30) and Killadiskert (26K16) branches of the Diffagher River are now reported as separate streams in this report).

River and Code : **DUNGOLMAN** **26/D/06**
Tributary of : Tang OS Catchment No: 157
OS Grid Ref : N 172 530 Date(s) Surveyed : 18/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)									
	1981	1984	1988	1989	1992	1994	1996	1999	2002	
East Branch										
0060 Br u/s Rackavarra Branch	-	-	-	-	-	4	4	4	3-4	
0080 Br nr Mullenineehan	-	-	-	4-5	-	3-4	4	4	4	
Main Channel										
0100 Ballycloghduff Br	-	-	4	-	3	-	3-4	-	-	
0110 300m d/s Ballycloghduff Br	-	-	-	-	-	-	-	4	3	
0200 Br W of Umma House	-	3-4	4	-	3-4	-	4	4	3-4*	
0300 Baskin Br	3-4	4	4	-	3-4	-	3-4	3-4	4	
0400 Br SE of Lecade	-	-	-	-	-	-	-	4	4-5	

Assessment: Excessive algal growths indicated that the East Branch of the Dungolman River was slightly polluted in its upper reaches (0060) in July 2002 but water quality was assessed as satisfactory near Mullenineehan (0080) further downstream. The complete absence of sensitive macroinvertebrates at Station 0110 and very heavy siltation at Station 0200 indicated a considerable deterioration in the upper Main Channel since the previous survey. The lower half of the river remained in a satisfactory quality condition. Agriculture is suspected as the most likely cause of the deteriorations noted.

*Heavy Siltation

River and Code : **ESLIN** **26/E/01**
Tributary of : Shannon OS Catchment No: 155
OS Grid Ref : N 054 877 Date(s) Surveyed : 04/07/2002

Stations No.	Biological Quality Ratings (Q Values)											
	1980	1982	1984	1986	1987	1989	1990	1992	1994	1996	1999	2002
0100	4-5	4	3-4	4	5	-	-	3-4	-	4-5	3-4	4
0150	-	-	-	-	-	-	-	4	-	4	4	-
0300	5	3	4	4-5	5	-	-	3-4	-	4	3-4	4
0400	4-5	4	3	4	5	-	-	3	-	4	3-4	4
0500	2	2	2	2	2	1-2	1	2	2-3	3	4	3-4
0600	2-3	3	3	2-3	2	2	1-2	2	2-3	3	4	3-4

Sampling Station
No. Location
0100 Drumgownagh Br
0150 Br W of Stuck
0300 Lough Erril Br

Sampling Station
No. Location
0400 Corrascoffy Br
0500 Br E of Dromod
0600 Killinaker Br

Eslin Continued

Assessment: Following improvements at three locations (0100, 0300, 0400) since 1999 water quality was satisfactory in the Eslin River as far as Dromod (0500, 0600) where it became slightly polluted.

River and Code : **FALLAN** **26/F/01**
Tributary of : Camlin OS Catchment No: 155
OS Grid Ref : N 079 765 Date(s) Surveyed : 16/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1984	1987	1989	1992	1996	1999	2002
East Branch							
0020 East Br NE of Abbeyderg	-	-	-	3-4	3-4	4	4
0030 Br S of Cloonker	-	-	4-5	4	-	-	-
0040 Br W of Curry	-	-	-	-	3-4	3-4	4
0045 Br u/s West Branch confl	-	-	4-5	4	-	-	-
Main Channel							
0200 Br S of Kilmore Upper	4	4	-	3-4	3-4	3-4	3-4

Assessment: Despite cattle access and considerable siltation, water quality was satisfactory at both locations on the East Branch (0020, 0040) but excessive algae at Station 0200 indicated significant eutrophication in the Main Channel in mid July 2002.

River and Code : **FARDRUMMAN STREAM** **26/F/06**
Tributary of : Black (Leitrim) OS Catchment No: 155
OS Grid Ref : Null Date(s) Surveyed : 10/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)		
	1996	1999	2002
0400 Br u/s Black R confl	4	4-5	4-5

Assessment: Continuing satisfactory.

River and Code : **FEORISH (BALLYFARNON)** **26/F/02**
Tributary of : Shannon OS Catchment No: 155
OS Grid Ref : G 944 103 Date(s) Surveyed : 19/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1982	1986	1987	1992	1996	1999	2002
0050 Bridge N. of Coolemoneen	-	-	4-5	4-5	4-5	4	4
0080 Br N of Ballycullen	-	-	-	-	4-5	4-5	4-5
0100 Foyoges Bridge	4-5	4-5	4-5	4-5	-	-	-
0200 Ballyfarnon Bridge	4-5	4-5	4-5	4-5	-	-	-
0250 1.2 km d/s Ballyfarnon Bridge	-	-	4-5	5	4-5	4-5	4-5
0300 Bridge N. of Clooncrufter	4-5	4-5	4	4-5	-	-	-
0400 Bridge 1.5 km S.W. of Keadue	5	4	4	5	4-5	5	4-5
0500 Bridge at Derreenavicara	5	4-5	4-5	5	4-5	4-5	4

Assessment: The Feorish (Ballyfarnon) is in satisfactory condition over its length. It has maintained a consistent pattern of good water quality since surveys began. Cattle in the river at the first station surveyed (0050) appear to be causing an unnecessary decline in water quality at that point. A slight deterioration in quality was also noted at the last station (0500) as evidenced by an unbalanced faunal community with excessive numbers of the filter-feeding Simuliidae larvae. It is not clear what the cause of this deterioration is but a smaller tributary river joining the Feorish at Leiterra between Stations 0400 and 0500 will be investigated in order to eliminate this as a potential source of problems.

River and Code : **FEORISH (TARMONBARRY)** **26/F/03**
Tributary of : Shannon OS Catchment No: 155
OS Grid Ref : N 042 767 Date(s) Surveyed : 09/10/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1982	1986	1987	1992	1996	1999	2002
0100 Bridge N.E. of Ballymoylin	4	4	2-3	1-2	2-3	2	-
0140 Br W of Dooslattagh	-	-	-	-	-	-	2-3
0200 Bridge E.S.E. of Northyard	4	4	3	3	3	3	4
0300 Cloonmore Bridge	4	4	4	3-4	-	-	-
0400 Br d/s Cloonmore Br	-	-	-	-	3	3	3

Assessment: The Upper Feorish (Termonbarry) was moderately polluted (0140) apparently due to agricultural impacts. An improvement was noted in the middle section (0200) in comparison with 1999 and compared also with the upstream station. Pollution sensitive species such as *Ephemera danica* were not observed at Station 0400 indicating moderate pollution in the lower river; this area is affected by commercial peat harvesting and also by the polluted Curraghroe River (q.v.)

River and Code : **FRANCIS** **26/F/05**
Tributary of : Suck OS Catchment No: 156
OS Grid Ref : M 674 798 Date(s) Surveyed : 31/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1981	1984	1987	1992	1996	1999	2002
<i>Lough Glinn Branch</i>							
0010 1st Bridge d/s Lough Glinn	-	-	-	3-4	3	3	4
<i>Main Channel</i>							
0020 Bridge d/s L Glinn Branch	-	-	5	4-5	4-5	4-5	4
0050 Cloonard Bridge	-	-	5	4-5	4-5	4-5	4-5
0100 Br 1.5 km N.N.E. of Castlerea	-	-	5	5	4	4-5	-
0300 Bridge u/s Suck River confl	4	3-4	4	4	3	4	4

Assessment: The Francis was in satisfactory condition over its length. An improvement was noted at Stn 0010 which had been designated previously as a tributary from Lough Glinn. Examination of the contour map in the area shows, however, that this is not the main outflow from Lough Glinn. A deterioration in quality was noted at Station 0020 but there was no change in the middle (0050) and lower station (0300) sampled.

River and Code : **GAINÉ** **26/G/01**
Tributary of : Lough Derravarragh OS Catchment No: 157
OS Grid Ref : N 400 660 Date(s) Surveyed : 09/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1984	1988	1992	1996	1999	2002
0100 Br 1 km NE of Ballynagall	3-4	3	3-4	3-4	3	3
0200 Br in Multyfarnham	3-4	4	3-4	3-4	3*	3
0300 0.8 km u/s L Derravarragh	-	-	-	3-4	3-4	3

Assessment: The complete absence of sensitive macroinvertebrate species indicated unsatisfactory water quality at each of the three locations sampled on the Gaine River in July 2002.

River and Code : **GLORE (WESTMEATH)** **26/G/02**
Tributary of : Inny (Shannon) OS Catchment No: 157
OS Grid Ref : N 483 722 Date(s) Surveyed : 09/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)							
	1977	1981	1984	1987	1992	1996	1999	2002
0100 Stonestown Br	-	5	3-4	4	3-4	4	3-4	3-4
0200 Br at Rockbrook	4	4-5	4-5	4	4	4-5	4-5	4-5

Assessment: Again slightly polluted/eutrophic below Glore lake (0100) where a DO of 146% was recorded at the time of this survey. Lower reaches remain satisfactory.

River and Code : **HIND** **26/H/01**
Tributary of : Lough Ree OS Catchment No: 155
OS Grid Ref : M 967 606 Date(s) Surveyed : 30/09/2002

Station No.	Biological Quality Ratings (Q Values)											
	1971	1974	1980	1983	1986	1987	1989	1990	1992	1996	1999	2002
0300	4	3-4	3	3	2-3	2-3	2	2-3	2-3	2	2	2-3
0400	4	3-4	3-4	4	3-4	3	-	-	3	2-3	2	2-3
0500	4-5	3-4	4	4	3-4	3-4	-	-	3	3	2-3	3

Sampling Station

No.	Location
0300	Bridge E. of Ballymartin
0400	Ballymurray Rway Station
0500	Br S. of Clooncah School

Assessment: The new sewage treatment works in Roscommon town is now treating a significant volume of waste that heretofore was discharged to the river with minimal treatment. A slight recovery was apparent in the main Hind River (0300,0400,0500) since 1999. The upper sections of the Hind system, The Jiggy (qv) and Rocksavage (qv) are now being reported upon separately but the Jiggy is still quite badly polluted and is still having a major impact on the main Hind River. It will take some time for the Jiggy to be flushed out after remedial works are completed on the old landfill in Roscommon Town. Similarly, with the main Hind - this is a slow-flowing river system with a low capacity for self-cleansing in the sense that floods in the river do not have sufficient velocity to scour out the organic sediments that have accumulated on the river bed over the years. The river has a low slope dropping by only some 6 metres over a distance of 10.5km between Ballymartin (0300) and Lough Ree. Water quality improvement will probably be relatively slow due to stored nutrients and organic loads in the sediments. However, the new treatment works and the remedial works on the old landfill will minimise future pollutant loads to the river such that more improvements will be forthcoming over time.

River and Code : **INNY**
 Tributary of : Lough Ree
 OS Grid Ref : N 115 554

26/I/01
 OS Catchment No: 157
 Date(s) Surveyed : 24, 25, 26/07/2002

Stations No.	Biological Quality Ratings (Q Values)									
	1971	1973	1977	1981	1984	1987	1992	1996	1999	2002
0060	-	-	-	-	-	4	3	3	3	3
0100	-	-	-	3-4	3-4	4	4	3-4	3-4	-
0200	4	4	4	4	4	3-4	3-4	3-4	3	3
0300	-	-	-	4	4-5	4	3-4	4	3	3
0500	3-4	3-4	4	3-4	3-4	3-4	3-4	3-4	3-4	3-4
0600	-	-	4-5	4-5	4-5	4	3-4	3-4	-	3-4*
0650	4	4	-	5	4-5	4-5	-	-	-	-
0700	-	-	-	-	-	-	3	3-4	3-4	4
0750	-	-	-	-	-	-	3-4	3-4	3-4	4
0800	4	4-5	4	4	4-5	4	3-4	4	4	3-4
0900	-	5	4	4	5	4	4	4-5	4	4
1000	5	4	4-5	5	4-5	5	3-4	4	4	3-4
1150	-	-	-	-	-	5	3-4	4	3-4	3-4
1200	4	4-5	4-5	4-5	4-5	5	3-4	4	4	4
1350	4-5	4-5	4-5	4-5	4-5	4-5	4-5	3-4	4	4
1400	-	-	-	4-5	4-5	5	4	3-4	4	4

Sampling Station
No. Location

Sampling Station
No. Location

0060 Br NW of Ballinvally
 0100 Br 1 km S of Oldcastle
 0200 Castlecor: 1st Br d/s St 0100
 0300 Ballinrink Br
 0500 Finnea Br
 0600 Camagh Br
 0650 Float Br
 0700 Br nr Shrubbywood

0750 Inny Br d/s L Derravaragh
 0800 Ballinalack Br
 0900 Ballycorkey Br
 1000 Ballynacarrow Br
 1150 Clynan or New Br
 1200 Newcastle Br
 1350 Shrulle Br
 1400 Red Br

Assessment: Agriculture and sewage are suspected as the primary sources of the continuing pollution recorded in the Inny River upstream of Lough Sheelin in July 2002. Downstream of this lake the enhanced trophic status of the river was reflected in the Q4 values recorded at most locations but there were indications of more pronounced ecological stress at several points. The residual effects of dredging (circa 1999) plus heavy peat siltation were apparent from the unbalanced and depressed biological diversity at Camagh Bridge (0600) where DO was reduced to 75% of saturation while excessive weed and/or algal growths indicated highly eutrophic conditions at Ballinalack (0800), Ballynacarrow (1000) and Clynan/New Bridge (1150).

*Siltation

River and Code : **ISLAND**
 Tributary of : Suck
 OS Grid Ref : M 697 723

26/I/03
 OS Catchment No: 156
 Date(s) Surveyed : 31/07/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1981	1984	1987	1992	1996	1999	2002
0040 Br SW of Cloonlee	-	-	-	-	4	4	4
0100 Island Bridge	4	4	4-5	4-5	4	4	4
0200 Br at Old Mill N. of Moneen	4-5	4-5	4-5	4	4-5	4-5	4
0300 Ford at Bookalagh	4-5	4-5	4-5	4-5	4-5	4-5	4-5
0400 Ballymoe: Castlereia Bridge	4-5	4	4-5	4	4-5	4	3-4

Assessment: The Island River was generally in satisfactory condition although suffering a loss in quality at the last station in Ballymore (0400) which had dropped in quality once again in comparison with the previous survey, showing signs of significant eutrophication. A deterioration was noted in the middle section also at Stn 0200 just north of Williamstown (Co. Galway). The catchment is 68% grassland and 27% bog with a number of SAC and NHA areas (turloughs and bogs) located within the catchment. Soil types include wet basin peats and drier grey-brown podzols. Soil phosphorus levels analysed tend to in index 3 and 4 - i.e. quite high especially if on the wetter soils where runoff is more likely.

River and Code : **JIGGY (HIND)**
 Tributary of : Hind
 OS Grid Ref : M 879 619

26/J/01
 OS Catchment No: 155
 Date(s) Surveyed : 30/09/2002

Stations No.	Biological Quality Ratings (Q Values)									
	1980	1983	1986	1987	1989	1990	1992	1996	1999	2002
0070	-	-	-	-	-	-	-	-	2	2-3
0090	-	-	-	1-2	2	2	1-2	1-2	1-2	2
0200	2	2-3	2-3	2	2	2-3	2	-	-	-

Sampling Station
 No. Location
 0070 Br d/s Creevyquin Trib confl
 0090 Br SW 'Union Workhouse'
 0200 Br N.E. of Ballinagard

Assessment: This tributary of the Hind (qv) was again polluted due to discharges in the vicinity of the town of Roscommon (both stations are upstream of the new sewage treatment works in Roscommon). An slight improvement was noted at Station 0090. The impact of the old landfill to the East of the town (now closed) will be lessened in the near future. It is due to be capped and leachates from the landfill are to be treated. Roscommon mart effluents are now being treated in the new sewage works in addition to other trade and domestic effluents

from the town of Roscommon. The river is quite slow-flowing in the town, however, and it has a significant build-up of organic sediment deposits. Thus, it is expected to take some time to clear and for water quality to improve significantly. Note that this river, Jiggy (Hind), was formerly reported upon as the North Branch tributary of the Hind River (qv).

River and Code : **KILLA CLARE STREAM[#]** **26/K/06**
 Tributary of : Lung OS Catchment No: 155
 OS Grid Ref : M 578 923 Date(s) Surveyed : 17/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)		
	1989	1992	1999
0500 Bridge N. of Aghadiffin	4-5	4-5	4
0700 Br u/s Lung R. confl.	-	4	4-5

Assessment: The Killaclare River was in very good condition at Kilmovee (0500) apart from some domestic refuse. The lower section was satisfactory (0700) upstream of the Lung River but there was a drop in quality between the two points sampled.

[#]Formerly reported as “Kiltaclare” Stream.

River and Code : **KILLADISKERT STREAM** **26/K/16**
 Tributary of : Diffagher OS Catchment No: 155
 OS Grid Ref : G 931 251 Date(s) Surveyed : 12/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1984	1987	1989	1992	1996	1999	2002
0600 Br u/s Confl with main Diffagher	-	-	4-5	-	4	4	4

Assessment: Satisfactory, no change.

[#]The Killadiskert Stream was formerly reported upon as the Killadiskert Branch of the Diffagher River (qv).

River and Code	: KILLEGLAN	26/K/04
Tributary of	: Suck	OS Catchment No: 156
OS Grid Ref	: M 858 396	Date(s) Surveyed : 18/10/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1992	1996	1999	2002
0200 Bridge u/s Suck River confl	4	4	4	4	4

Assessment: The Killeglan was satisfactory at the location sampled. The catchment is a grassland catchment on dry soils with sheep farming being the main land use.

River and Code	: KILLIAN	26/K/01
Tributary of	: Shiven	OS Catchment No: 156
OS Grid Ref	: M 742 490	Date(s) Surveyed : 20/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1981	1984	1987	1992	1996	1999	2002
0050 Br W of Corracullin	-	-	-	-	4	4	4
0100 Kingstown Bridge	4	4	4	4-5	4	4	4-5
0200 New Bridge	4	3-4	4	3-4	3-4	4	4
0300 Bridge u/s Shiven (S.) River	4-5	3-4	4	4	4	4	4

Assessment: Water quality in the Killian River was satisfactory over its length. An improvement was noted in the middle section (0100) in comparison with 1999. The last station while still Q4 appears to be more eutrophic than heretofore. Cattle access to the river at this point may be in part at least responsible for the quantities of algae noted here. The catchment in general is a low agricultural intensity catchment with a low human population also. The CORINE land cover map shows relatively little intensive grassland areas in the catchment. There are a number of SAC and NHA areas in the catchment (bogs and turloughs). Soils are either degraded grey-brown podzols (dry) or basin or cut-over peat (wet). There are some high phosphorus values (Index 4) reported for soils in the lower part of the catchment.

River and Code	: KILLUKIN	26/K/02
Tributary of	: Shannon	OS Catchment No: 155
OS Grid Ref	: M 940 987	Date(s) Surveyed : 2/10/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1992	1996	1999	2002
0100 Bridge d/s Lisdaly Lough	3-4	3-4	3	3	3
0300 Bridge N. of Carrowreagh	3-4	3	-	-	3
0700 Bridge E. of Killukin	4	4	4	4	4-5

Assessment: The upper and middle section of the Killukin (0100, 0300) were moderately polluted. An improvement was noted in the lower section upstream of Carrick on Shannon where the Killukin joins the main River Shannon. The Killukin catchment land use is dominated by pasture for cattle and sheep on a poor-draining gley soil with basin and cut over peats.

River and Code	: KILMACRICARD	26/K/17
Tributary of	: Springfield	OS Catchment No: 156
OS Grid Ref	: -	Date(s) Surveyed : 01/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1981	1984	1987	1992	1996	1999	2002
0025 Br 2 km N. of Keeloges Cross	4	3-4	4	3	-	-	-
0030 Br NE of Kilmacricard	-	-	-	-	3-4	4	4-5

Assessment: The Kilmacricard Stream is a small tributary of the Springfield River (qv) and was formerly reported as the East Branch of the Springfield. Quality was good at the location surveyed and it is felt that this stream provides an example of a high quality first order stream.

River and Code : **KILMACTRANNY** **26/K/03**
Tributary of : Lough Skean OS Catchment No: 155
OS Grid Ref : G 852 123 Date(s) Surveyed : 17/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1992	1996	1999	2002
0300 Br N of Kilmactranny	-	-	dry	-	dry
0800 First Bridge u/s Lough Skean	4	4	4	-	4

Assessment: The upper Kilmactranny (0300) was again dry in September 2002. The lower section (0800) upstream of Lough Skean was of satisfactory quality.

River and Code : **KINARD** **26/K/07**
Tributary of : Owenur OS Catchment No: 155
OS Grid Ref : M 960 895 Date(s) Surveyed : 2/10/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1989	1992	1996	1999	2002
0300 Bridge S. of Ryefield	4	-	4	4	4
0500 Carrowkeel Bridge	4	4	3-4	3	3-4

Assessment: Water quality was satisfactory at the upper station sampled (0300) but the lower site (0500) was highly eutrophic with very extensive Cladophora growths. The Kinard is a very hard water river (conductivity 559µS/cm) on Upper Carboniferous Limestone bedrock and gley soils. The catchment is almost entirely grassland pasture with a small proportion of forestry including a new plantation upstream of Station 0300.

River and Code : **LAURENCETOWN STREAM** **26/L/07**
Tributary of : Suck OS Catchment No: 156
OS Grid Ref : M 930 253 Date(s) Surveyed : 17/10/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)					
		1987	1992	1994	1996	1999	2002
0300	Bridge E. of Sycamorehill	3	2-3	2	2	1	2-3
0500	Bridge near Kylemore Bridge	3-4	3	-	2-3	3	2-3

Assessment: Although an improvement was noted at Stn 0300 downstream of a known point source discharge (fellmonger), quality at the lower site (0500) near Kylemore Bridge had deteriorated slightly in comparison with 1999. Both sites are now classified as moderately polluted.

River and Code : **LENAMORE STREAM** **26/L/06**
Tributary of : Inny (Shannon) OS Catchment No: 157
OS Grid Ref : N 260 621 Date(s) Surveyed : 16/07/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)				
		1988	1992	1996	1999	2002
0200	Br nr Ballyglassin	5	4	4	4	4
0400	Br at Lenamore	3-4	3	4	4	3-4

Assessment: Continuing satisfactory in its middle reaches (0200) but excessive weed and algal growths indicated increasing eutrophication at Legan Bridge (0400) in July 2002.

River and Code : **LISDALY STREAM** **26/L/02**
Tributary of : Lisdaly Lough/Killukin River OS Catchment No: 155
OS Grid Ref : M 877 952 Date(s) Surveyed : 01/10/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)					
		1980	1984	1987	1992	1996	1999
0100	Bridge N.E. of Croghan House	-	-	3	3	-	3
0200	Bridge u/s Lisdaly Lough	3	3	3	3	4	4

Assessment: The Lisdaly stream was slightly polluted upstream of Lisdaly Lough when sampled in early October 2002.

River and Code : **LISSAPHOBLE** **26/L/04**
Tributary of : Scramoge OS Catchment No: 155
OS Grid Ref : M 948 792 Date(s) Surveyed : 16/10/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)						
		1984	1986	1987	1992	1996	1999	2002
0100	Bridge d/s Loughannatryna	-	-	4	3-4	3	3	3
0300	West Bridge at Ballinfad	4	4	4	-	-	-	-
0500	Br NE of Lissonuffy	-	-	-	4	3	4	4

Assessment: Dissolved oxygen concentrations were low (55%) at the upper station sampled (0100). No sensitive invertebrates were found and some indicators of organic pollution were noted (Chironomus). In previous years extremely high daytime oxygen saturations were noted (140%) here indicating eutrophication problems. Cattle access was blocked off on the day of sampling but cow dung was noted on the river bed indicating that cattle access to the river may be a contributor to the problem. This upper station (0100) has a 6.2 km² catchment area upstream but is on well-drained soil and flows are low. Water quality in the lower section (0500) was satisfactory albeit quite silted in places.

River and Code : **LISSYDALY STREAM** **26/L/10**
Tributary of : Anaderryboy OS Catchment No: 155
OS Grid Ref : M 596 874 Date(s) Surveyed : 17/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1989	1994	1996	1999	2002
0500 Bridge N. of Sanvolaun	5	4-5	4	4-5	4-5
0800 Bridge near Aghadiffin	4-5	-	4	4	4-5
0900 Lissydaly Bridge	4-5	4	4	4	4-5

Assessment: Water quality was good in the Lissydaly showing an improvement on the most recent 1999 survey. Catchment land cover is predominantly peat bogs with some low intensity pasture and grazing together with quite extensive forestry plantations particularly in the upper catchment. Forestry and drainage activities had given rise to problems in the past and there are still impacts obvious due to peat siltation especially at Station 0800. Particular care is needed with routine drainage activities in this catchment as potentially it is a river of high ecological status.

River and Code : **LUNG** **26/L/03**
Tributary of : Lough Gara OS Catchment No: 155
OS Grid Ref : M 677 965 Date(s) Surveyed : 09/09/02

Stations No.	Biological Quality Ratings (Q Values)											
	1971	1974	1978	1980	1982	1984	1987	1992	1994	1996	1999	2002
0100	-	-	4-5	5	5	5	4-5	4-5	-	4	4	4-5
0200	5	5	4-5	4	5	5	4	4-5	-	4	4-5	4-5
0250	-	-	-	-	-	-	4	4	-	3-4	4	-
0275	-	-	-	-	-	-	-	-	-	-	-	4-5
0350	5	4-5	4	4-5	4	4	3	4	4	4	4-5	-
0400	5	4-5	3	3	4	4	3	3-4	2	2-3	3	4

Sampling Station		Sampling Station	
No.	Location	No.	Location
0100	Figh Bridge	0275	0.5 km d/s Aghalustia Br
0200	Crunaun Bridge	0350	Bridge W. of Banada
0250	2 km S. of Ballagherreen	0400	Bridge u/s Lough Gara

Assessment: The Lung River was unpolluted at all sites surveyed in September 2002. This is the first time since the early 1980s that all sites were in satisfactory condition and it is to be hoped that this will continue. The upper Lung (0100, 0200) reflects the quality of the rivers flowing into it, Anaderryboy (qv) and Lissydaly (qv). A new site has been

added (0275) just downstream of the Ballaghaderreen landfill in order to monitor its impact on the Lung. Water quality both here and at Station 0350 was good with no obvious impact. In the lower Lung serious industrial pollution in the 1990s caused a series of major fish kills and it has taken some time for the river to recover to its current state downstream of Ballaghderreen (0400).

River and Code : **MANTUA STREAM[#]** **26/M/13**
 Tributary of : Owenur OS Catchment No: 155
 OS Grid Ref : M 757 858 Date(s) Surveyed : 3/10/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1992	1996	1999	2002
0060 Second Br S. of Rossmore Ho	4	-	dry	-	2-3
0080 Bridge S.W. of Cherryfield	4	3	2-3	3-4	4

Assessment: The Mantua Stream was formerly reported upon as a branch of the Owenur River (qv). The first site was moderately polluted (0060). The second site was, however, of satisfactory quality. This section of river has been well fenced to keep animals out of the stream and this may have contributed to the improvement in water quality.

[#]The Mantua Stream was formerly reported as the Mantua branch of the Owenur River (qv).

River and Code : **MIHANBOY** **26/M/04**
 Tributary of : Cross OS Catchment No: 155
 OS Grid Ref : M 994 418 Date(s) Surveyed : 17/10/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1994	1996	1999	2002
0200 Bridge u/s Cross River confl	4	4	4	4	3

Assessment: The Mihanboy showed little change on previous surveys. Water quality was satisfactory.

River and Code : **MOUNTNUGENT** **26/M/02**
Tributary of : Lough Sheelin OS Catchment No: 157
OS Grid Ref : N 474 853 Date(s) Surveyed : 24/07/2002

Stations No.	Biological Quality Ratings (Q Values)									
	1973	1977	1981	1984	1987	1988	1992	1996	1999	2002
0040	-	-	-	-	-	-	4	4-5	3-4	4
0200	4	3-4	4	4-5	1	4	4	3-4	3	4-5
0350	-	-	-	-	3	-	3-4	3-4	3-4	3-4
0500	4	4	3-4	4	4	-	3-4	3-4	3-4	4

Sampling Station
No. Location
0040 Br to N of Rockville
0200 Br nr Derrylea
0350 Br E of Kilnacrott Ho
0500 Mountnugent Br

Assessment: Following a marked improvement at Derrylea (0200) and minor improvements in its upper (0040) and lower (0500) reaches, the Mountnugent River was in a mostly satisfactory condition when surveyed in late July 2002. Cattle access still poses a threat at Station 0040 but, in a positive development new fencing has made the river inaccessible to farm animals at Derrylea.

River and Code : **OWENGAR (LEITRIM)** **26/O/02**
Tributary of : Diffagher OS Catchment No: 155
OS Grid Ref : G 930 243 Date(s) Surveyed : 12/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1984	1987	1992	1996	1999	2002
0075 SE Letter	-	-	-	-	-	4-5
0100 Bridge at Barragh	5	4-5	4-5	4	4-5	4-5
0200 Bridge at Annagherry	4	4	5	4-5	3-4*	-

Assessment: The Owengar was in satisfactory condition at the two locations sampled in September 2002. The catchment is an upland one dropping almost 70 m over 3.5km between the two stations sampled. The catchment is located on Upper Avonian shales and sandstone bedrock and the river has low conductivity (69 and 80 $\mu\text{S}/\text{cm}$ respectively at 0075 and 0100). Upland blanket peats and gley soils dominate the catchment while land use includes a high proportion of forestry (approx.30%) and low intensity animal grazing.

River and Code : **OWENMORE (GLANGEVLIN)** **26/O/03**
Tributary of : Shannon OS Catchment No: 155
OS Grid Ref : H 033 292 Date(s) Surveyed : 02/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)							
	1977	1981	1984	1987	1992	1996	1999	2002
<i>Bursan Branch</i>								
0100 Carty's Br	-	-	-	5	4-5	4-5	5	4-5
<i>Bellavally Branch</i>								
0120 Br SE of Carty's Br	-	-	-	5	4-5	5	4-5	5
<i>Derryananta Branch</i>								
0140 Br u/s Bellavally Branch confl	-	-	-	5	4	4-5	4-5	4-5
<i>Main Channel</i>								
0300 Br W of Legnagrow Lough	5	5	5	5	4-5	5	4-5	4-5

Assessment: Satisfactory. No significant change.

River and Code : **OWENNAFOREESHA** **26/O/04**
Tributary of : Breedoge OS Catchment No: 155
OS Grid Ref : M 762 909 Date(s) Surveyed : 11/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1981	1984	1987	1992	1996	1999	2002
0100 Bellanagare Bridge	4	4	3-4	4	4	3-4	3-4
0120 0.2km d/s Bellanagare Br	-	-	-	-	-	-	3-4
0200 100 m u/s Breedoge confl	-	-	-	4-5	4	4	4-5

Assessment: The Owennaforeesha was eutrophic in the upper part (0100) of the catchment where the land use is primarily pasture on gley and basin peat soils. A new station downstream of the discharge point of the new sewage treatment works for Bellanagare village was added to the programme (0120) in order to assess its impact on the river. No major difference was apparent at Station 0120 in comparison with Station 0100 located some 120m upstream and both stations were at the same Q-Value of Q3-4 - i.e. slightly polluted. The lower catchment has an area of peat bog and natural grasslands which have been afforested to a certain extent. Water quality at the lower site (0200) had improved noticeably in comparison with the most recent previous surveys. It also contrasts quite strongly with the Carricknabraher River (qv) which joins the Owennaforeesha just downstream of station 0200 to form the Breedoge River (qv).

River and Code : **OWENNAYLE** **26/O/05**
Tributary of : Shannon OS Catchment No: 155
OS Grid Ref : G 975 261 Date(s) Surveyed : 01/07/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)							
		1976	1981	1984	1987	1992	1996	1999	2002
0050	Br NE of Aughrim	-	-	-	5	4	4	4	4
0100	Br d/s Owennayle Br	4-5	4-5	5	5	4	4-5	4-5	4

Assessment: Water quality continued to be satisfactory at both locations surveyed in early July 2002. The relatively sparse fauna reflects the flash-flood nature of this river.

River and Code : **OWENUR** **26/O/06**
Tributary of : Grange Lake OS Catchment No: 155
OS Grid Ref : M 956 860 Date(s) Surveyed : 3/10/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)						
		1980	1984	1987	1992	1996	1999	2002
0100	Br near Ballyoughter House	4	4	4	4	4	3-4	3
0300	Br d/s Elphin Tributary confl	4	4	4	4	4	4	3-4
0400	Drummullin Bridge	4	4	4	4-5	4	4	4
0500	Grange Bridge	4	3-4	4	3-4	3	3	4

Assessment: A deterioration was noted in the upper stations on the Owenur (0100, 0300) in comparison with 1999. The middle and lower section (0400, 0500), however, were in satisfactory condition and an improvement in quality was noted at the last station upstream of Grange Lough (0500) compared with the 1999 survey. Note that former Station 0080 on the Owenur River is now reported as the Mantua Stream (qv).

River and Code : **RATH** **26/R/01**
Tributary of : Inny (Shannon) OS Catchment No: 157
OS Grid Ref : N 187 575 Date(s) Surveyed : 17/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)							
	1977	1981	1984	1988	1992	1996	1999	2002
0030 Washford Br	-	-	-	4	3	3-4	-	3-4*
0100 Br 2 km S of Moyvore	-	-	4-5	4	4	4	4	4
0300 Br u/s Inny R confl	4	4	4-5	3-4	4	4	3-4	4

Assessment: The Rath River had not fully recovered from the dredging of 1999 at Washford Bridge where it was still heavily silted in mid-July 2002. Conditions improved somewhat downstream.

*Heavy Siltation.

River and Code : **RELAGH** **26/R/05**
Tributary of : Cloone (Lough Rinn) OS Catchment No: 155
OS Grid Ref : N 125 978 Date(s) Surveyed : 03/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1987	1992	1996	1999	2002
0400 Br u/s Drumroosk Branch confl	5	4-5	5	4-5	4-5
0700 Br S of Edergole	5	-	3-4	4-5	4-5
0900 Br u/s Cloone R confl	5	4	4	4	4

Assessment: Continuing satisfactory. Large quantities of black plastic were observed in the river at Station 0700. Quality could be better in the lower reaches (0900).

River and Code : **RHINE** **26/R/04**
Tributary of : Cloonfin Lough OS Catchment No: 155
OS Grid Ref : N 266 805 Date(s) Surveyed : 11/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)							
	1987	1988	1989	1990	1992	1996	1999	2002
0200 Br N of Cartron	2	2	1	2	2-3	2	2	2
0700 Ballymore Br	4-5	-	-	-	3-4	3	3	3

Assessment: The upper reaches of this small stream were again seriously polluted by suspected sewage from Granard in July 2002 (DO 58%). The lower reaches (0700) remained in a similar unsatisfactory condition to that recorded in June 1999.

River and Code : **RINN** **26/R/02**
Tributary of : Lough Forbes OS Catchment No: 155
OS Grid Ref : N 081 824 Date(s) Surveyed : 04, 10, 11/07/2002

Stations No.	Biological Quality Ratings (Q Values)											
	1971	1978	1980	1984	1986	1987	1990	1992	1994	1996	1999	2002
0060	-	-	-	1	1	1	2	1-2	2-3	2-3	2-3	2-3
0100	3	2-3	3	3	2	2	-	3	-	2-3	2-3	2-3
0200	-	-	3-4	3-4	3-4	4	-	-	-	3-4	3-4	3-4
0300	4-5	3-4	4-5	4	4-5	4-5	-	4	-	4-5	4	4
0400	-	3-4	4-5	4	4	4	-	3-4	-	4	-	4

Sampling Station No. Location	
0060 Br 1.6 km d/s Mohill ¹	¹ Not shown on OS Catchment Map
0100 Br u/s Lough Rinn ¹	¹ Not shown on OS Catchment Map
0200 Annaghveagh Br	
0300 Johnston's Br	
0400 Cloonart Br	

Assessment: The quality profile of the Rinn River in July 2002 had not changed since 1999: the reach upstream of Lough Rinn (0060, 0100) was again considerably polluted by suspected sewage from Mohill and the effects were still evident below this lake at Annaghveagh Bridge (0200). For the remainder of its course indications were that quality was no better than 'Fair'.

River and Cod	: ROCKSAVAGE[#]	26/R/07
Tributary of	: Hind	OS Catchment No: 155
OS Grid Ref	: M 879 619	Date(s) Surveyed : 30/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1987	1989	1992	1996	1999	2002
0250 Br E. of Ballygalda Ho	3	3	4	4	4	4

Assessment: The Rocksavage River is a tributary of the Hind. Water quality was satisfactory when surveyed in late September 2002. No change was noted on recent surveys. The upper section of this catchment appears, on the basis of surface contours, to contain at least part of the Ballinturly Turlough, an SAC, although groundwater flow direction may be into the adjoining Suck River Callows region.

[#] Formerly reported as Hind, South Branch (26H010250).

River and Code	: SCRAMOGE	26/S/01
Tributary of	: Mountain (Roscommon)	OS Catchment No: 155
OS Grid Ref	: M 965 838	Date(s) Surveyed : 4/10/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)							
	1981	1984	1986	1987	1992	1996	1999	2002
0050 Bridge d/s Lough Conny More	-	-	-	4	4	4	4	4
0100 Bridge d/s Lough Gal	4	4	4	4	4	3-4	4	4
0200 Cloonfree Bridge	4-5	4	4	4	4	4	4	4-5
0300 Bridge N.E. of Riverdale	3-4	4	4-5	4	3	4	4	4
0600 Scramoge Bridge	4	4	4-5	4	4	4	4	4-5
0700 Bridge u/s Kilglass Lough	-	-	5	4-5	3-4	3	3-4	4

Assessment: The Scramoge was satisfactory over its entire length in early October 2002. An improvement in quality was noted particularly at the last station. The upper catchment has a number of Turloughs including an NHA and SAC/NHA Turlough. The drainage pattern is unclear with a low density of surface drainage channels, implying in turn that subsurface flow is quite important. Sheep numbers are quite high in the upper elevated section of the catchment. Pasture is the main land cover type in the catchment as a whole and the soils are predominantly poorly drained gleys and grey-brown podzolics.

River and Code : **SHAD LOUGH STREAM** **26/S/13**
Tributary of : Scramoge OS Catchment No: 155
OS Grid Ref : M909790 Date(s) Surveyed : 16/10/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1989	1994	1996	1999	2002
0100 Br d/s Shad Lough	-	-	4	4	-
0250 Br NNE Ballyglas	-	-	-	-	4

Assessment: The lower reaches of the Shad Lough Stream were in a satisfactory condition when surveyed in October 2002.

River and Code : **SHANNON (Upper)** **26/S/02**
Tributary of : Sea Shannon Estuary OS Catchment No: 155
OS Grid Ref : R 580 600 Date(s) Surveyed : 01 to 23/08/2002

Stations No.	Biological Quality Ratings (Q Values)										
	1972	1976	1982	1984	1985	1987	1990	1992	1996	1999	2002
0100	-	-	-	-	5	5	-	4	4-5	4	4
0200	-	-	5	-	5	5	-	5	5	4-5	4-5
0300	-	-	5	-	5	5	-	5	4-5	4-5	5
0400	-	-	-	4	-	4-5	-	3-4	4	3-4	3-4*
0500	4-5	-	-	4-5	-	5	-	4	4-5	4	4
1010	-	-	-	-	-	-	-	4	3-4	4	3
1410	-	-	-	-	-	-	-	-	3-4	4	3-4
1415	-	-	-	-	-	-	3	2-3	3	3-4	3-4
1510	-	-	-	-	-	-	-	3	3-4	3-4	3-4**
1600	-	-	-	-	-	-	-	-	-	3*	3*
1720	-	-	-	-	-	-	3	2-3	3	3-4	3-4
1800	-	5	-	4	-	-	-	-	4	4	3-4

Sampling Station No. Location	Sampling Station No. Location
0100 Shannon Br, Derrylahan	1410 Roosky: d/s Lock (LHS)
0200 Metal Br S of Tullynafreave	1415 Roosky: d/s Old Canal (RHS)
0300 Dowra Br	1510 d/s Tarmonbarry Weir (LHS)
0400 New Br Mahanagh	1600 Ballyleague Br Lanesboro
0500 Battle Br	1720 Athlone: Burgess Park (LHS)
1010 Jamestown: d/s Weir (LHS)	1800 Clonmacnoise: at Jetty

Assessment: Water quality continued to be satisfactory in the Shannon upstream of Lough Allen in 2002 but below this lake the presence of well

developed silt-slime complexes, the virtual absence of sensitive macroinvertebrates and a rust coloured deposit on the stones and gravel indicated some ecological stress at Galley Bridge (0400): this may be connected with dredging in the lower lake in the years 1997 and onwards. Further downstream the river had become very weedy but because sensitive mayfly species were still to be found a biotic index of Q4 was achieved at Battle Bridge (0500). These indicator species were not observed at Jamestown (1010), however, and because they had been found there previously, their absence plus very heavy bottom siltation indicated a considerable deterioration in the stretch below Carrick-on-Shannon since 1999. Slight pollution/eutrophication was indicated by the luxuriant algal growths below Roosky (1410) Tarmonbarry (1510) and Athlone (1800) while hot water discharges and peat siltation produced more marked effects below the power station at Lanesborough (1600); the temperature here was 22.4 degrees celsius or five degrees higher than at Athlone.

*Heavy siltation

**Thermal effects plus peat siltation

River and Code	: SHIVEN (SOUTH)	26/S/03
Tributary of	: Suck	OS Catchment No: 156
OS Grid Ref	: M 816 483	Date(s) Surveyed : 19/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1980	1984	1987	1992	1996	1999	2002
0040 Bridge near Shankill School	-	-	2-3	3	3	3-4	2-3
0060 Bridge E. of Gunnode	-	-	3	4	3	4	3-4
0100 Tirur Bridge	4	3-4	4	4	3	3	3-4
0200 Rookhill Ford	3-4	3-4	3-4	3	3	4*	3
0300 Ballinamore Bridge	5	4	4	4	4	4	4
0400 Islandcausk Bridge	4	4	4	4	4	4	4

Assessment: The Shiven deteriorated in the upper reaches (0040, 0060) compared with the 1999 results. Cattle access at Stn 0040 may be contributing to the poor quality at this point. A slight improvement was noted at Tirur Bridge (0100) albeit still very eutrophic. Station 0200 showed even greater signs of eutrophication sensitive taxa virtually eliminated and dissolved oxygen saturation levels of 135%. Fish species included sticklebacks and stoneloaches, both of which are quite tolerant of poor conditions. The last two stations (0300, 0400) were significantly better than upstream although showing some signs of eutrophication with a dissolved oxygen saturation of 124%.

River and Code : **SMAGHRAAN** **26/S/04**
Tributary of : Suck OS Catchment No: 156
OS Grid Ref : M 803 646 Date(s) Surveyed : 30/09/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1984	1987	1992	1996	1999	2002
0100 Smaghraan Bridge	3-4	4	4	3	3	3
0200 Br E. of Old Mill (Rockfield)	4	4	3-4	4	4	4
0300 Bridge W. of Emlaghnaagree	3-4	4	3-4	3-4	3-4	3-4

Assessment: The upper Smaghraan (0100) remained moderately polluted in 2002. The mid section (0200) retained its satisfactory quality and there was no change in the lower section (0300) where no sensitive taxa were found. Species such as *Ephemera danica* which was last found here in 1987 no longer appear to be able to survive in the lower river upstream of its confluence with the River Suck (qv). Land use is predominantly pasture with a large number of sheep in the catchment. Most soils in the catchment are well drained although there are some poorly drained gleys and basin peats in the vicinity of the river channel at Stn 0100 and 0300.

River and Code : **SPRINGFIELD** **26/S/05**
Tributary of : Island OS Catchment No: 156
OS Grid Ref : M 660 720 Date(s) Surveyed : 01/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1981	1984	1987	1992	1996	1999	2002
0100 Blacker's Bridge	4	2-3	3	3	3-4	4	3
0150 Ford at Monasterowen	4	3-4	5	3-4	4-5	4-5	4
0200 Ballaghaugeag Bridge	4	4	4-5	4	4-5	4	4

Assessment: The upper Springfield River (0100) had apparently suffered an organic pollution incident some time prior to sampling in early August 2002 as evidenced by the large number of *Chironomus* sp. larvae found in the sample. Recovery was in progress, however, and some sensitive species were beginning to re-colonise the river. Quality may have been sustained by reasonably high flows during the Summer of 2002. Cattle were noted walking into the river freely downstream of the Blackers Bridge (0100). Quality was satisfactory at the remaining stations sampled (0150, 0200).

River and Code : **STROKESTOWN** **26/S/08**
Tributary of : Mountain (Roscommon) OS Catchment No: 155
OS Grid Ref : M 965 838 Date(s) Surveyed : 03/10/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)					
		1984	1987	1992	1996	1999	2002
0050	Br at S. end of Strokestown	-	3	2-3	2-3	2-3	3
0100	D/s Strokestown SSE of Standing St 3-4		3	2-3	4	2-3	3
0200	Br near Toberpatrick House	4	4	4	3-4	4	4

Assessment: A slight improvement was noted in the Strokestown River in the immediate vicinity of Strokestown (0050, 0100). The river is impacted by a landfill site and by treated sewage from the town of Strokestown and remains moderately polluted at these sites. The lowermost station (0200) was in satisfactory condition.

River and Code : **SUCK** **26/S/07**
Tributary of : Shannon OS Catchment No: 156
OS Grid Ref : M 965 249 Date(s) Surveyed : 29/07/02

Stations No.	Biological Quality Ratings (Q Values)										
	1971	1974	1978	1980	1983	1984	1987	1992	1996	1999	2002
0030	-	-	-	-	-	-	3-4	4	3-4	4	4-5
0050	-	-	-	-	-	-	4	4	4	4-5	4-5
0100	5	5	5	4-5	-	4	4-5	4-5	4-5	4-5	4-5
0200	-	-	-	-	-	-	4	4	4-5	4-5	4-5
0300	5	4	4-5	4	-	4	4	3	4	4	4
0400	-	-	4	4	-	4	4	4	3	4	4
0500	5	4-5	4	4	-	4	4-5	4-5	4	4	4-5
0540	-	-	-	-	-	-	-	-	-	-	4
0550	-	-	-	4	-	4	4	4	4	4	-
0600	5	4-5	4-5	4-5	-	4-5	4	4	4	3-4	4-5
0650	-	-	-	-	-	-	-	-	4	4	3-4
0700	-	-	4-5	5	-	4-5	4-5	4-5	4	4-5	4-5
0800	5	4	4-5	3-4	-	3-4	3-4	4	3-4	4	3-4
0870	-	-	-	-	-	-	-	-	3	3	3-4
0900	5	3-4	4-5	4-5	-	4	4-5	4	3-4	4	3
1000	-	5	4-5	5	-	4-5	4-5	4	4	4	4-5
1100	5	5	4-5	4	-	4	4	4	4	4	4-5
1125	-	-	-	-	4	-	4	4	4	4	4
1200	5	5	4-5	4-5	4-5	-	4-5	4-5	4	3-4	4
1300	-	-	-	4	3-4	-	3-4	3-4	3-4	4	4
1400	4	4	4	3	3-4	-	3	3	2-3	2-3	3-4
1500	4-5	3-4	4-5	3-4	3-4	-	3	3-4	3	3	3-4

Suck Continued

Sampling Station		Sampling Station	
No.	Location	No.	Location
0030	Bridge u/s Lough O'Flynn	0700	Castlestrange Bridge
0050	Bridge d/s Lough O'Flynn	0800	Athleague Bridge
0100	Bridge W. of Cloonalis House	0870	N of Gorteenclough
0200	Bridge u/s Castlerea	0900	Rookwood Bridge
0300	Cloondacarra Bridge	0900	Rookwood Bridge
0400	Br E. of Willsbrook House	1000	Mount Talbot Bridge
0500	Ballymoe Bridge	1100	Ballyforan Bridge
0540	1 km u/s Lough Doo	1125	Bridge W. of Feevagh
0540	1 km u/s Lough Doo	1200	Bellagill Bridge
0550	500 m d/s Lough Doo	1300	Ballinasloe Bridge
0600	Donamon Bridge	1400	3 km d/s B'nasloe (Pollboy)
0650	Br nr Castlecoote	1500	Correen Ford

Assessment: The first 40 kilometres of the Suck River were in satisfactory condition when surveyed in July 2002. A significant improvement in quality was noted at two of the nine sites surveyed over this distance (0030, 0500) and a major improvement was recorded at Dunamon (0600) in comparison with 1999. Unfortunately in the middle section, a deterioration was noted at Castlecoote (0650) and also at Athleague (0800) and downstream of Athleague (0870, 0900) where there is a major meat processing plant discharging to the river. At Rookwood Bridge (0900), for example, no pollution-sensitive macroinvertebrates were recorded and taxa such as *Ecdyonurus* sp. and *Ephemera danica* noted in 1999 were missing from the faunal community in the 2002 survey. The stretch from Mount Talbot to Ballinasloe Town, however, did show a significant improvement in quality in comparison with 1999. Downstream of Ballinasloe for the first time in a long time quality improved and is now in the slightly polluted category (Q3-4). Previously discharges from the rendering plant upstream of Pollboy caused quite serious water pollution particularly in view of the size of the river Suck at this point (it drains a catchment area of over 1,400km² upstream at this point). The EPA's IPC Licensing division has taken over responsibility for the licensing of this plant and it is hope to see ongoing improvements in the lower Suck between Pollboy and the Shannon confluence (1400,1500).

River and Code	: TANG	26/T/02
Tributary of	: Inny (Shannon)	OS Catchment No: 157
OS Grid Ref	: N 130 543	Date(s) Surveyed : 17/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)							
	1977	1981	1984	1988	1992	1996	1999	2002
0200 Tang Bridge	4-5	4-5	4	3-4	3-4	3-4	4	3-4

Assessment: The absence of sensitive species is attributed to eutrophication rather than organic pollution and so a Q3-4 was ascribed even though a Q3 might have been. The river bed was carpeted with a thick, crumbly layer of heavily calcified moss which is an unsuitable habitat for several of the more sensitive indicator species. Algal growth, although considerable was not excessive, but this is attributed to the calcification and fragmentation of the filaments which is a typical feature of enriched, hard waters.

River and Code : **TERMON STREAM** **26/T/03**
Tributary of : Francis OS Catchment No: 156
OS Grid Ref : M 695 795 Date(s) Surveyed : 31/07/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1989	1994	1996	1999	2002
0300 Bridge S. of Termon	4	4	2-3	4-5	4

Assessment: Satisfactory, albeit with a slight drop in quality since 1999.

River and Code : **YELLOW (BALLINAGLERA)** **26/Y/01**
Tributary of : Lough Allen OS Catchment No: 155
OS Grid Ref : G 983 210 Date(s) Surveyed : 02/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1986	1987	1992	1996	1999	2002
0100 Br N of Aughrim	4	4	4	5	4	4-5
0200 Br u/s Lough Allen	4	4	4	4-5	4	4-5

Assessment: Water quality continued to be satisfactory at both locations surveyed in early July 2002. The relatively sparse fauna reflects the flash-flood nature of this river.

River and Code : **YELLOW (CASTLEPOLLARD)** **26/Y/02**
Tributary of : Lough Derravarragh OS Catchment No: 157
OS Grid Ref : N 425 688 Date(s) Surveyed : 09/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1984	1987	1992	1996	1999	2002
0060 Ballyknock Br	-	-	-	-	4-5	3-4*
0100 Br N of Milltown	4	4	4	4	4	4
0250 Kiltoom Br (2nd Br u/s lake)	-	4	3-4	3-4	-	3

Assessment: Dredging is suspected as causing the heavy siltation and the considerable contraction in faunal diversity in the upper reaches (0060) of this small river in July 2002. The middle reaches (0100) were not so heavily silted and, although tolerant species such as *Gammarus* sp. were relatively numerous, the more sensitive mayfly *Ecdyonurus* sp. was present in numbers sufficient to just about warrant a Q4. The lower reaches were moderately polluted by suspected sewage at that time. *Heavy Siltation.

HYDROMETRIC AREA 31
(Part only; balance in 2003)

Galway Bay North

Crumlin	31C02
Knock (Furbo)	31K01
Loughinch	31L01
Owenriff (South Galway)	31O04
Polleen	31P01

River and Code : **CRUMLIN (GALWAY BAY)** **31/C/02**
Tributary of : Sea - Galway Bay OS Catchment No: 139
OS Grid Ref : M 038 214 Date(s) Surveyed : 12/8/02

No.	Location	Biological Quality Ratings (Q Values)					
		1986	1990	1994	1997	1999	2002
0100	Crumlin Bridge	4	4	3-4	4	4	4

Assessment: The Crumlin is a Connemara river with a very impoverished fauna apparently due to its acidic nature. No significant change was noticed in comparison with the most recent previous surveys.

River and Code : **KNOCK (FURBO)** **31/K/01**
Tributary of : Sea - Galway Bay OS Catchment No: 142
OS Grid Ref : M 184 228 Date(s) Surveyed : 12/8/02

No.	Location	Biological Quality Ratings (Q Values)					
		1986	1990	1994	1997	1999	2002
0100	Knockadrohid Bridge	-	4	3-4	3-4	4	3-4
0200	Bridge at Derryoughter	5	4	4	4-5	4-5	4

Assessment: The Knock River declined in quality in the upper reaches (0100) in comparison with the 1999 survey. The catchment upstream of Knocka Lough is afforested. Satisfactory conditions were noted in the lower section (0200) at Doire Uachtair.

River and Code : **LOUGHINCH** **31/L/01**
Tributary of : Knock (Furbo) OS Catchment No: 142
OS Grid Ref : M 186 232 Date(s) Surveyed : 12/8/02

No.	Location	Biological Quality Ratings (Q Values)					
		1986	1990	1994	1997	1999	2002
0020	Br 0.6km d/s Lough Inch	-	-	-	-	3	3-4
0100	Second Br u/s Knock River	-	4	4	4	4	4
0200	Just u/s Knock River confl	4-5	-	-	-	-	-

Assessment: The Loughinch River showed signs of improvement at the upper site downstream of Lough Inch and the Bearna Golf Club. The lower section (0100) was satisfactory.

River and Code : **OWENRIFF (SOUTH GALWAY)** **31/O/04**
 Tributary of : Sea - Galway Bay OS Catchment No: 140
 OS Grid Ref : M 089 221 Date(s) Surveyed : 12/08/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1986	1990	1994	1997	1999	2002
0100 Br 2.3 km d/s Loughaunnagun	-	4	4	4	4	3-4
0200 Bridge N.W. of Caher	-	4	-	-	-	-
0300 Bridge W. of Caher	4	3	4	4	4-5	4

Assessment: The Owenriff (S Galway) is situated on a granite bedrock catchment with blanket bog as the predominant natural landcover. The upper section (0100) is quite acidic with an impoverished fauna. There are some 20 individual lakes in the upper catchment of 74 ha in total and approximately 300 ha of forestry plantations in this base-poor area so enhanced acidity is an expected adverse consequence. No sensitive species were noted at the upper reach sample location in 2002. The lower section (0300) was satisfactory but perhaps not reaching its full potential due to a septic tank overflow.

River and Code : **POLLEEN** **31/P/01**
 Tributary of : Sea - Galway Bay OS Catchment No: 04
 OS Grid Ref : M 096 220 Date(s) Surveyed : 12/8/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0100 Bridge S. of Polleen	4	4	4	3-4	3-4

Assessment: The Polleen was again slightly polluted in 2002.

HYDROMETRIC AREA 33 (Part)
Blacksod – Broadhaven

Altnabrocky	33A02
Barroosky	33B08
Ballinglen	33B01
Belderg	33B02
Bellagarvaun	33B04
Bellanaboy	33B07
[Bunanioo]	[33B09]
Cartron	33C02
Cloonalaghan	33C01
Clooneen (Mayo)	33C03
[Dooega]	[33D01]
[Doolough Stream]	[33D02]
Glenamoy	33G01
Glencastle	33G08
Glencullin (North Mayo)	33G02
Glencullin (West Mayo)	33G03
Gleghassera	33G05
Gortmore Stream (Mayo)	33G04
Gweedaney	33G06
Keerglen	33K01
Muing	33M01
Muingnabo	33M02
Munhin	33M03
Owenduff (Blacksod)	33O01
Owenmore (Mayo)	33O04
Sheskin Stream	33S03
Tarsaghaunmore	33T01

Due to time constraints the rivers shown in square brackets were not surveyed in 2002: these will be surveyed in 2003.

River and Code : **ALTNABROCKY** **33/A/02**
Tributary of : Owenmore (Mayo) OS Catchment No: 105
OS Grid Ref : F 980 198 Date(s) Surveyed : 14/8/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0100 Just u/s Owenmore River confl	5	4-5	4-5	4-5	4-5

Assessment: The Altnabracky River was again in satisfactory condition when sampled in August 2002.

River and Code : **BALLINGLEN** **33/B/01**
Tributary of : Bunatrahir Bay OS Catchment No: 102
OS Grid Ref : G 103 393 Date(s) Surveyed : 28/08/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1981	1986	1990	1994	1997	1999	2002
0100 Ballinglen Bridge	5	5	5	-	4-5	4-5	5
0110 Bridge d/s Ballinglen Bridge	-	-	-	5	-	-	-
0150 Bridge W. of Milltown	-	5	4-5	-	-	4-5	-
0200 Bridge W. of Corhoor	4	4	4	4-5	4	-	4-5
0210 New Br (RHS)	-	-	-	-	-	-	3

Assessment: The upper Ballinglen where sampled (0100) had a wide range of sensitive macroinvertebrates indicating generally good water quality. There were some signs of enrichment, however, in that *Cladophora* sp. was present and the indicator moss species *Amblystegium riparium*. Over the half the catchment at this point is afforested with conifer monocultures (pine and spruce) or recently clear-felled. The lower river (0200) was also in satisfactory condition as far as the point where the Ballycastle sewage pipe discharge to the river upstream of the bridge. At this point, however, sewage fungus was moderately abundant on the substratum on the right hand side of the river some 200m downstream of the discharge point (0210). This sample was taken slightly further upstream than in previous years in order to assess the impact of the discharge more clearly.

River and Code	: BARROOSKY	33/B/08
Tributary of	: Glenamoy	OS Catchment No: 100
OS Grid Ref	: F 929 333	Date(s) Surveyed : 16/8/02

Sampling Stations	Biological Quality Ratings (Q Values)
No. Location	2002
0400 0.3km u/s Glenamoy	4-5

Assessment: The Barroosky is a tributary of the Glenamoy surveyed for the first time as part of the National Biological Monitoring Programme. The river was of satisfactory quality and notable for the high numbers of *Ecdyonurus* sp. There were, however, signs of bank erosion and bank reinforcement indicating damage due to activities in the catchment. There are extensive forestry plantations in the upper catchment and sheep grazing is a major activity in the catchment.

River and Code	: BELDERG	33/B/02
Tributary of	: Sea - Belderg Harbour	OS Catchment No: 99
OS Grid Ref	: F 993 414	Date(s) Surveyed : 16/8/02

Sampling Stations	Biological Quality Ratings (Q Values)
No. Location	1990 1994 1997 1999 2002
0200 Bridge in Belderg	4-5 4 4 4 3-4

Assessment: A deterioration was noted in the quality of the Belderg River where surveyed (0200) in comparison with all previous surveys. The catchment is a blanket bog catchment with forestry plantations in the upper section in particular surrounding Lougherglass which is near the source of the Belderg River.

River and Code : **BELLAGARVAUN** **33/B/04**
Tributary of : Sea - E.S.E. of Inishbiggle OS Catchment No: i5
OS Grid Ref : F 824 044 Date(s) Surveyed : 20/8/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0300 0.3 km u/s Br SW of Bellaveeny Lough.	3-4	3-4	3-4	3	3

Assessment: The Bellagarvaun was again polluted in August 2002. This is a remote river on metamorphic bedrock with approximately 30% of the upstream catchment (23km²) planted with coniferous trees. The remainder comprises predominantly blanket bog with a small percentage of cattle grazing. The river was previously noted as suffering from the release of iron pan from drainage activities in the catchment. The presence of organic mats on the river bed suggests that there are still problems related to drainage in the catchment.

River and Code : **BELLANABOY** **33/B/07**
Tributary of : Carrowmore Lake OS Catchment No: 105
OS Grid Ref : F 849 304 Date(s) Surveyed : 16/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0200 Bridge u/s Carrowmore Lake	4-5	4	4	4-5	4

Assessment: The Bellanaboy was sampled in mid August 2002. Quality was satisfactory although not quite as good as in 1999. A small number of the pollution sensitive mayfly *Ecdyonurus* sp. was found and a relatively large population of *Potamopyrgus* sp. was also noted as the dominant component of the macroinvertebrate community. This river is important as it is a major tributary of Lough Carrowmore and has been the focus of attention in Environmental Impact Studies related to the proposed Bellanaboy gas terminal which has been the subject of a number of hearings.

River and Code : **CARTRON** **33/C/02**
Tributary of : Sea - Bellacragher Bay OS Catchment No: 15
OS Grid Ref : F 800 015 Date(s) Surveyed : 20/8/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1982	1986	1990	1994	1997	1999	2002
0100 Bridge W. of Lough Gall	4-5	4-5	4	4	3-4	3	3

Assessment: The Cartron catchment is located in a predominantly quartzite bedrock area with poorly drained peat soils. Over 40% of the catchment upstream of the sample point (0100) is afforested - i.e. most of the catchment below 150m in altitude. The river has lost its more sensitive macroinvertebrate species and is generally noted for extensive algal growths. Mayflies (*Baetis* sp.) had returned in 2002 having been noted as completely absent in 1999. As these are particularly acid sensitive it may indicate that conditions are slightly less acidic than heretofore. A conductivity of 106.8 μ S/cm was noted on the survey date. The Cartron is part of a research study aimed at understanding the detailed mechanisms by which species such as *Ecdyonurus* sp. are eliminated from river ecosystems when they become polluted.

River and Code : **CLOONALAGHAN** **33/C/01**
Tributary of : Sea - Lacken Bay OS Catchment No: 103
OS Grid Ref : G 189 366 Date(s) Surveyed : 10/9/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1989	1990	1994	1997	1999	2002
0300 Bridge S.E. of Billoos X-Rds	-	4-5	4	5	4-5	4
0700 Bridge S.E. of Carrowmore	4	2-3	3	4	2-3	4

Assessment: The upper Cloonalaghan (0300) had been dredged and its banks cleared of trees and vegetation. Water quality here was satisfactory. The lower Cloonalaghan (0700) had recovered once again in 2002 with 'sewage fungus' growths no longer present at the lower station. Quite extensive *Cladophora* sp. growths, however, suggest that the system is still quite eutrophic albeit with sufficient macroinvertebrate density and diversity to warrant a Q-Value of 4 when examined in early September 2002. The Cloonalaghan has had a chequered history of farm pollution, however, especially in the lower reaches and it is essential that existing pollution control measures are maintained.

River and Code : **CLOONEEN (MAYO)** **33/C/03**
Tributary of : Sea - Moyrahan Bay OS Catchment No: k5
OS Grid Ref : F 706 355 Date(s) Surveyed : 10/9/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0050 NW of Bartrauve	3/0	3/0	3	3	3

Assessment: The Clooneen continues to be impacted apparently by peat harvesting and drainage activities in the catchment.

River and Code : **GLENAMOY** **33/G/01**
Tributary of : Sea - Sruwaddacon Bay OS Catchment No: 100
OS Grid Ref : F 870 360 Date(s) Surveyed : 16/8/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1981	1986	1990	1994	1997	1999	2002
0020 Br N Glencarly	-	-	-	-	-	-	4-5
0050 Bridge S.E. of Bunalty	4-5	4-5	4-5	3-4*	4-5	4-5	4
0100 Glenamoy Bridge	5	4-5	4-5	3-4*	4-5	4-5	4-5

Assessment: The upper Glenamoy River (0020) was in satisfactory condition when surveyed in August 2002. This site was added in 2002 in order to assess the extent of the siltation problem that was apparent in the middle reaches (0050) where extensive organic mats were noted. The Barroosky River (qv) was also surveyed for the first time in order to assess its impact on the main Glenamoy river. It is possible that drainage activities along the main channel are responsible for the problems observed but a more detailed investigation of peat harvesting, sheep grazing and forestry activities in the catchment as a whole is necessary to pin down the main sources of the problem. In the middle section of the Glenamoy the macroinvertebrate fauna appears satisfactory if viewed in isolation from its previous history and the obvious siltation and musty organic mats that coat the substratum. However, species such as the pollution sensitive stonefly *Perla bipunctata* previously found here (e.g. 1997) were not present when sampled in 2002 nor 1999. A recovery was noted in the lower section (0100) with the Q-Value rising to Q4-5 albeit still too much algae and an insufficient number of truly pollution sensitive species necessary to class it as a high status and high quality site.

River and Code : **GLENCASTLE** **33/G/08**
Tributary of : Sea - Trawmore Bay OS Catchment No: k5
OS Grid Ref : F 750 290 Date(s) Surveyed : 10/9/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0200 Br u/s Glencastle Br.	-	4-5	3-4	4	3-4
0500 Bridge S. of Bunnahowen	4	3	4	4	4

Assessment: Quality had once again deteriorated in the upper section of the Glencastle (0200) which was slightly polluted in September 2002. The Glencastle quarry is located downstream of this site although the sampling site may have been affected by the laying of a new concrete surface on the left hand side of the river - runoff was noted from fresh concrete. The quarry at Glencastle has expanded dramatically since the previous survey in 1999. Quality downstream at Bunnahowen was classed as satisfactory although musty organic mats coated the substratum - usually an indication of iron pan disruption and drainage activities. The severe turbidity noted in 1994, for example, was not seen on the survey date. The catchment is schist and gneiss bedrock with wet soils and dominated by blanket peat especially in the upper section and some mixed grassland in the lower portion of the catchment.

River and Code : **GLENCULLIN (NORTH MAYO)** **33/G/02**
Tributary of : Sea - Bunatrahir Bay OS Catchment No: 101
OS Grid Ref : G 095 398 Date(s) Surveyed : 28/8/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1981	1986	1990	1994	1997	1999	2002
0100 Ford W. of Ballycastle	5	5	4-5	4-5	4-5	4-5	3-4
0200 Bridge near Coxestown	5	5	5	4-5	4-5	4-5	4

Assessment: An unbalanced fauna with excessive numbers of *Baetis* sp. indicated that the upper Glencullin (0100) was being slightly polluted. The upper catchment has approximately two-thirds forest cover (primarily conifers) with some areas clear-felled in the recent past.

River and Code : **GLENCULLIN (WEST MAYO)** **33/G/03**
Tributary of : Carrowmore Lake OS Catchment No: 105
OS Grid Ref : F 844 284 Date(s) Surveyed : 14/8/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0100 Br u/s Carrowmore Lake	-	-	-	-	4
0200 1 km u/s Carrowmore Lake	4-5	5	5	4-5	-

Assessment: The lower reaches (0100) of the Glencullin, a tributary of Lake Carrowmore, were in a satisfactory condition when sampled in August 2002.

River and Code : **GLENGLOSSERA** **33/G/05**
Tributary of : Sea - Glenloss Point OS Catchment No: m5
OS Grid Ref : G 024 416 Date(s) Surveyed : 10/9/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0100 Br near Glenlossera Lodge	4	4-5	4-5	4-5	4-5

Assessment: Water quality remains satisfactory in this remote North Mayo river. The Glenglossera is a blanket bog catchment with some afforestation and recently clear-felled and replanted areas. The upper section of the catchment is on shales and sandstones and the lower portion on schist and gneiss bedrock.

River and Code : **GORTMORE STREAM (MAYO)** **33/G/04**
Tributary of : Sea - Bunatrahir Bay OS Catchment No: n5
OS Grid Ref : G 108 400 Date(s) Surveyed : 10/09/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0800 Bridge W. of Gortmore	4	4	3-4	4	4

Assessment: The Gortmore is a hard-water river (conductivity of 462µS/cm) in satisfactory condition. A slight improvement in water quality was noted in comparison with the 1999 survey albeit not sufficient to raise the Q-Value above Q4.

River and Code	: GWEEDANEY	33/G/06
Tributary of	: Sea - Broad Haven	OS Catchment No: 15
OS Grid Ref	: F 850 391	Date(s) Surveyed : 16/8/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0100 Bridge E. of Curraunboy	4	3	3-4	4	3

Assessment: The Gweedaney was again polluted due to overgrazing impacts with no sensitive faunal species present. Severe bank erosion was noted with major portions of the river bank detaching during flood conditions. The area has had one of the highest sheep stocking densities in the country (2.8 total sheep per ha and 1.5 ewes/ha in the 1991 Agricultural Census). The Gweedaney is located on schist and gneiss bedrock and the catchment soils are persistently wet with blanket peat as the main land cover - i.e. not suitable for high stocking densities. It is felt that sheep overgrazing is having a particularly severe impact on this remote North Mayo river. The condition of the catchment and river is unfortunate as it is located in an area of special conservation and natural heritage.

River and Code	: KEERGLLEN	33/K/01
Tributary of	: Ballinglen	OS Catchment No: 102
OS Grid Ref	: G 105 338	Date(s) Surveyed : 28/08/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0200 Bridge N.E. of Doondragon	5	5	4-5	5	5

Assessment: The Keerglen continues to be in a highly satisfactory condition.

River and Code	: MUING	33/M/01
Tributary of	: Owenmore (Mayo)	OS Catchment No: 105
OS Grid Ref	: F 971 199	Date(s) Surveyed : 14/8/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0100 Just u/s Owenmore River	4	3-4	3-4	3-4	3-4

Assessment: High levels of peat siltation were once again noted in this tributary of the Owenmore river. The sample station (0100) is located downstream of a peat workings tailings pond designed to trap peat silt.

River and Code	: MUINGNABO	33/M/02
Tributary of	: Sea - Sruwaddacon Bay	OS Catchment No: 98
OS Grid Ref	: F 870 358	Date(s) Surveyed : 16/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0100 S.W. of Srahnataggle	4-5	-	-	-	-
0140 0.6km u/s Annie Brady's Bridge	-	-	-	-	3-4
0150 0.3 km u/s Annie Brady Bridge	-	4	3-4	4	-

Assessment: The Muingnabo River was slightly polluted when surveyed in the lower section (0140) in August 2002. This catchment adjoins the Gweedaney (qv) which was badly impacted by sheep overgrazing. Stocking densities are lower in the Muingnabo region and the bog upstream appears to be more intact than in the case of the Gweedaney. As the river is in the Glenamoy Bog Complex SAC it is necessary to investigate the potential causes of water quality problems in more detail.

River and Code : **MUNHIN** **33/M/03**
Tributary of : Owenmore (Mayo) OS Catchment No: 105
OS Grid Ref : F 818 228 Date(s) Surveyed : 02/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1981	1986	1990	1994	1997	1999	2002
0200 Bridge u/s Owenmore River	4	4-5	4-5	4	4	4	3-4

Assessment: The Munhin was slightly polluted at the point sampled (0200). The Munhin is located downstream of Carrowmore Lake and an extensive area of Bord na Mona exploited bog. It is notable for its large population of the hemipteran, *Aphelocheirus* sp. which was still present in August 2002. However, none of the most pollution-sensitive macroinvertebrate species were found at the site in 2002 in contrast to 1999. Turbidity has always been noticeable at this site (0200) due to the peat workings upstream and it is also highly influenced by Lake Carrowmore which has a surface area of over 900 ha. It is reported that Carrowmore Lake has yielded large numbers of salmon to the rod in recent years.

River and Code : **OWENDUFF (BLACKSOD)** **33/O/01**
Tributary of : Sea - Tullaghan Bay OS Catchment No: 106
OS Grid Ref : F 794 150 Date(s) Surveyed : 20/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)						
	1981	1986	1990	1994	1999	2002	
South Branch							
0005 Ford NW of Srahduggan	-	-	-	3-4	4	4	
Main Channel							
0010 N. of Srahduggan	-	5	4	4	4	4-5	
0020 Near Sheean Lodge	-	5	4-5	4-5	4-5	4	
0030 Ford u/s Tarsaghanmore River	-	5	4-5	4	4	4	
0100 Srahnamanragh Bridge	4	5	4	4	4-5	4	
0100 Srahnamanragh Bridge	4	5	4	4	4-5	4	

Assessment: The Owenduff River is located in the proposed new national park for North Mayo. The catchment is over 127km² in area and is on siliceous bedrock with over 90% peat bog cover which in combination makes it quite acidic in nature. The rainfall is high with an effective rainfall of over 1060mm giving an estimated average discharge of over 4m³/s at Station 0100. The catchment does not appear to be subject to any major pressures such as sheep overgrazing or extensive forestry drainage. The main land use is cattle grazing but there is little intensive pasture in the catchment for example. Some bank erosion was noted at Station 0010 indicating that there may be some problems in the

upper catchment. The faunal community is impoverished in numbers and low in diversity. An analysis of historical information does not suggest that there has been any major change in the system over the past 20 years or so. Thus, this may be the natural state for the river particularly in view of the apparently low degree of anthropogenic pressure in the catchment. Nonetheless the low number of the typical pollution sensitive indicator species is somewhat surprising for such a remote and apparently unspoiled region. Even allowing for the acidic nature of the catchment, which would be expected to cause a reduction in faunal diversity and abundance, the Owenduff compares poorly in this respect against a number of other western rivers which are apparently of a similar type. A more extensive survey of the river and the pressures impacting on it is required to confirm the status of the Owenduff and ensure that the catchment is being managed for best protection of this new national park.

River and Code : **OWENMORE (MAYO)** **33/O/04**
 Tributary of : Sea - Tullaghan Bay OS Catchment No: 105
 OS Grid Ref : F 803 208 Date(s) Surveyed : 02/08/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)							
	1980	1981	1986	1990	1994	1997	1999	2002
0050 At Srahnakilly (Main flow)	-	-	4-5	5	4-5	4	4-5	4
0090 300 m u/s Bellacorick Bridge	5	-	-	4-5	-	-	-	-
0100 Bellacorick Bridge	4	-	4-5	5	-	-	-	-
0150 1.1 km d/s Bellacorick Br	-	-	-	4	4-5	4	4	4-5
0250 S. of Tawnaghmore (nr School)	-	-	4-5	4	-	-	-	-
0270 W. of Largan	-	-	-	4	4	4-5	4-5	4-5
0300 Br at Bangor Erris (Main fl)	-	4-5	4	4	4-5	4-5	4-5	4-5
0301 Bridge at Bangor Erris (RHS)	-	-	-	3	2-3	4	-	-
0400 3km u/s Munhin River confl	-	-	-	5	-	-	4-5	4
0500 700 m d/s Munhin River confl	-	-	-	4	4	4-5	4	4-5

Assessment: The Owenmore River was surveyed in early August 2002. Water quality was satisfactory over its length and a good range of pollution-sensitive species present in spite of the ubiquitous presence of silt arising from commercially exploited peat bogs in the catchment. Siltation was especially notable in the upper sections (0050, 0150). Nonetheless an improvement in quality was noted at Stn 0150, downstream of Bellacorick village and power station, in comparison with 1999. In the middle reaches, as far as Bangor, quality was satisfactory (0270, 0300). A slight deterioration in quality was noted downstream of Bangor (400) in comparison with 1999. Quality was again of a good to high standard at the last station sampled, which is downstream of the Munhin River (qv) which flows from Lough Carrowmore.

River and Code : **SHESKIN STREAM** **33/S/03**
Tributary of : Owenmore (Mayo) OS Catchment No: 105
OS Grid Ref : F 979 232 Date(s) Surveyed : 02/08/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0150 Bridge 1 km u/s Oweniny R	5	4-5	4-5	4-5	4

Assessment: The Sheskin Stream was of satisfactory quality with a number of pollution sensitive species present in early August 2002. Peat siltation was noted upstream of Station 0150 due to extensive peat bog workings.

River and Code : **TARSAGHAUNMORE** **33/T/01**
Tributary of : Owenduff (Blacksod) OS Catchment No: 106
OS Grid Ref : F 832 144 Date(s) Surveyed : 20/08/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1990	1994	1997	1999	2002
0100 Just u/s Owenduff River	4	4	4	4-5	4-5

Assessment: The Tarsaghaunmore is a tributary of the Owenduff River (qv) and located in the proposed new North Mayo national park. Water quality was satisfactory although the river had more filamentous algae and grazing species such as *Lymnaea peregra* than would be expected for its remote blanket bog location. While the river appears to have an unimpacted catchment upstream it may be that this acidic region is extremely sensitive to any pressure - such as a small number of grazing cattle or sheep.

Balance of
HYDROMETRIC AREA 34
Moy and Killala Bay

Note: Most rivers in this area were surveyed in 2002

Behy (N Mayo)	34B08
Brusna (N Mayo)	34B07
Crumlin (L. Cullin)	34C11
Lough Muck Stream	34L05
Slieveclaur	34S06
Yellow (Knock)	34Y02

River and Code : **BEHY (NORTH MAYO)** **34/B/08**
Tributary of : Glenree OS Catchment No: 110
OS Grid Ref : G 283 182 Date(s) Surveyed : 15/7/02

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)				
		1989	1993	1995	1998	2002
0300	Bridge S.W. of Oatlands House	5	3*	5	5	4-5
0400	Behy Bridge	5	4	4-5	3-4/0	4-5

Assessment: Satisfactory. The leak of domestic oil into the river noted in the previous survey has been stopped and faunal quality is good. Cattle access at Station 0400 may be impairing quality somewhat.

River and Code : **BRUSNA (NORTH MAYO)** **34/B/07**
Tributary of : Glenree OS Catchment No: 110
OS Grid Ref : G 289 190 Date(s) Surveyed : 15/07/2002

Sampling Stations No.	Location	Biological Quality Ratings (Q Values)					
		1989	1993	1995	1999	2001	2002
0200	Bridge E. of Emlymoran	4-5	4-5	4-5	4	4	-
0400	Bridge W. of Cloonta	4	-	5	4-5	-	4-5
0600	Just u/s Glenree River confl	4-5	4-5	4	4-5	-	4

Assessment: The Brusna was in satisfactory condition in July 2002. A slight deterioration in quality was noted at the lower station sampled (0400).

River and Code : **CRUMLIN (LOUGH CULLIN)** **34/C/11**
 Tributary of : Lough Cullin OS Catchment No: 110
 OS Grid Ref : G 222 018 Date(s) Surveyed : 28/08/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1989	1994	1995	1998	2002
0300 Bridge u/s Lough Cullin	4-5	4	3-4	4	3-4*

Assessment: A significant siltation/turbidity problem was noted in the the Crumlin River on the day of sampling in late August 2002. Very high suspended solids were noted giving the river a distinct yellow colour. A quarry or similar operation was suspected as the source of the problem and Mayo County Council was notified of the change in status vis a vis the 1998 survey. The Crumlin is tributary of Lough Cullin is located in what is apparently a low-impact catchment -i.e. low-lying blanket bog on wet soils.

River and Code : **LOUGH MUCK STREAM** **34/L/05**
 Tributary of : Moy OS Catchment No: 110
 OS Grid Ref : M 284 995 Date(s) Surveyed : 16/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1989	1993	1995	1999	2002
0600 Bridge u/s Moy River confl	3-4	4	4	3-4	4

Assessment: Satisfactory. The Lough Muck stream had improved in comparison with 1999.

River and Code : **SLIEVECLAUR** **34/S/06**
Tributary of : Deel (Crossmolina) OS Catchment No: 110
OS Grid Ref : G 157 203 Date(s) Surveyed : 15/7/02

Sampling Stations No. Location	Biological Quality Ratings (Q Values)					
	1989	1993	1995	1999	2001	2002
0200 Br near Slieveclaur	-	-	-	3-4	-	3
0400 Ballyneety Bridge	3-4	3	3	3	3-4	3-4

Assessment: This tributary of the lower River Deel continues to be unsatisfactory due to diffuse agricultural sources of pollution. A deterioration was noted in the upper section (0200) in comparison with 1999 and the lower station (0400) retained its slightly polluted status as in 2001.

River and Code : **YELLOW (KNOCK)** **34/Y/02**
Tributary of : Cultybo Lough OS Catchment No: 110
OS Grid Ref : M 338 861 Date(s) Surveyed : 16/07/2002

Sampling Stations No. Location	Biological Quality Ratings (Q Values)				
	1989	1993	1995	1998	2002
<i>Derrykin Lough Branch</i>					
0250 Bridge S.W. of Eden	3-4	3-4	-	-	4
0255 120 m d/s Br S.W. of Eden	3	3-4	2	2-3	2-3
0275 Bridge N.E. of Faughil	3	4	3	4	4
<i>Main Channel</i>					
0290 Bridge S.E. of Kiltimagh	3-4	4	3-4	4	-
0400 Bridge just u/s Cultybo L	4	4-5	4	4	4

Assessment: The Yellow (Knock) was once again polluted downstream of the outflow from the Knock sewage discharge (0255). A recovery was noted by Stn 0275, some 2km downstream of the discharge. The lowermost station upstream of L. Cultybo was once again impacted by excessive silt and turbidity apparently due to ongoing drainage activities in the river.

Note on Alternative River Names

The great majority of the names assigned to rivers in this Report are those shown on the One-Inch and Half-Inch Ordnance Survey Maps and which are in everyday usage. However, in many instances the maps denote different reaches of rivers by separate names, at times without there being an obvious boundary between the designations. In addition, very many of the rivers (major watercourses such as the Barrow, Erne or Shannon excepted) will have local names which do not find their way onto official maps or records. Clearly, the topic is one of great complexity and one which is unlikely ever to be covered definitively.

The names adopted in this Report reflect the usages of the monitoring agencies, national and local, and are considered to be the most reasonable choices. It is recognised that some of the designations are arbitrary, but this is unavoidable. However, where the compilers of this Report are aware of alternative river names details have been presented in the table below. It should be noted that some of such alternative river names may, on maps or in local usage, refer to specific reaches rather than to rivers as a whole.

River Name

ACORE
AFFICK
AGHASLANE
AHACLARE
AHAPHUCA
ALTDERG
ALTNACALLY STREAM
ANNAGH [GALWAY]
ANNAMOE
ANNESTOWN
ARAGLEN
ARDNAGLASS
ARDSOLLUS
ARDULTAGH
ATTYCHRAAN
AUGHASLANE
AUGHAVARIA
BACK BURN
BALLINLOUGH (Longford)
BALLINTRILICK
BALLYBEG [TIPPERARY]
BALLYGRIFFY
BALLYMACDONNELL
BALLYMAHON [SUIR]
BALLYNAHOW
BALTRACEY
BARDINCH
BARNES
BARORA
BARRA
BAURERAGH
BAUTEOGE
BAWNUFF
BEALBOY
BEALNACARRA
BELLADOOAN
BELVIEW
BLACK [DRISH]
BLACK [KILDARE/LAOIS]

River Name Adopted in Report

See MONEFELIM [14/M/03]
See RINE [27/R/01]
See AGHACASHLAUN [36/A/03]
See OWENOGARNEY [27/O/01]
See SHEEP [18/S/03]
See OWENMORE [MAYO] [33/O/04]
See GWEEBARRA [38/G/02]
See BOLEYNEENDORRISH [29/B/04]
See AVONMORE [10/A/05]
See DUNHILL [17D02]
See OWENTARAGLIN [18/O/09]
See DUNMORAN [35D16]
See RINE [27/R/01]
See KILCROW [25/K/01]
See FUNSHION [18/F/05]
See AGHACASHLAUN [36/A/03]
See BILBOA [25/B/03]
See MILL [DONEGAL] [39/M/02]
See RHINE (26/R/04)
See BALLAGHNATRILICK [35/B/02]
See BREAGAGH [TIPP] [16/B/03]
See SHALLEE [27/S/01]
See OWENOGARNEY [27/O/01]
See FARNEYBRIDGE [16/F/02]
See FARNEYBRIDGE [16/F/02]
See CLONSHANBO [09/C/03]
See SULLANE [19/S/02]
See ESKE [37/E/05]
See Moynalty (07M03)
See GWEEBARRA [38/G/02]
See SHEEN [21/S/01]
See STRADBALLY [14/S/02]
See OWENDUFF [BLACKSOD] [33/O/01]
See YELLOW [FOXSFORD] [34/Y/01]
See RECESS [31/R/01]
See BREAGHWY [34/B/06]
See ATHBOY [07/A/01]
See DRISH [16/D/02]
See FIGILE [14F01]

Alternative River Names [Continued]

River Name

River Name Adopted in Report

BLACK [LOUTH]	See RASKEAGH [06/R/02]
BOHERBAUN	See TULLY STREAM [14/T/02]
BOOLAHALLAGH	See FINISK [18/F/02]
BOOLYREE	See RINE [27/R/01]
BREANOGE	See AUGHBOY [WEXFORD] [11/A/02]
BROCKAGH	See OWENNABROCKAGH [32/O/04]
BUINGEA	See CUMMER [19/C/02]
BUNGOSTEEN	See STRAGAR [37/S/02]
BUNOWEN [SUCK]	See AHASCRAUGH [26/A/01]
BUNRATTY	See OWENOGARNEY [27/O/01]
CAHER	See GRANNEY [SHANNON] [25/G/04]
CALVERSTOWN STREAM	See KILCULLEN STREAM [09/K/02]
CAMOWEN	See CRANA [39/C/02]
CAPPAGH [FLESK]	See FINOW [22/F/04]
CARHEENY	See MOYREE [27/M/02]
CARN	See CLOONALAGHAN [33/C/01]
CARNAHORNA	See FAYMORE [38/F/01]
CARROWBEG [WESTPORT]	See WESTPORT [32/W/01]
CARROWKEEL [DEALAGH]	See DEALAGH [28/D/01]
CASTLE	See CULLIES [36/C/03]
CASTLEPOOK	See BREGOGE [18/B/04]
CLADDAGH	See SWANLINBAR [36/S/01]
CLARE [TIPPERARY]	See ANNAGH [TIPPERARY] [25/A/02]
CLARIN	See CLARINBRIDGE [29/C/02]
CLAUREEN [CLARE]	See INCH [CLARE] [27/I/01]
CLOGHATANNY	See MOATE STREAM (25/M/05)
CLOGHER BURN	See CLOGHER [FINN] [01/C/06]
CLOGHOGE RIVER	See AVONMORE [10/A/05]
CLONARD	See KINNEGAD [07/K/01]
CLONBROCK	See AHASCRAUGH [26/A/01]
CLONYMEATH	See KNIGHTSBROOK [07/K/02]
CLOON [MAYO]	See AILLE [MAYO] [30/A/02]
CLOONARD	See FRANCIS [26/F/05]
CLOONASCRAUGH	See BALLINURE [26/B/01]
CLYDAGH [KERRY]	See FLESK [KERRY] [22/F/02]
COARSE	See OWENGARVE [SLIGO] [34/O/03]
COOKSTOWN	See GLENCULLEN [10/G/02]
COORACLARE	See DOONBEG [28/D/02]
CORBAUN	See RHINE [26/C/08]
CORKER	See OILY [37/O/01]
CORDUFF	See BALLOUGH STREAM [08/B/03]
CORLEA	See BLEACH [25/B/07]
CORRIES	See BACK [BORRIS] [14/B/06]
CORRYDOO	See CARTRON [33/C/02]
COUNTY (SLIGO/FERMANAGH)	See KILCOO [35/K/04]
COUMNAGUN	See OWENOGARNEY [27/O/01]
CREGGAN	See CASTLETOWN [06/C/01]
CROAGH	See BUNCROWEY [35/B/09]
CROLLY	See GWEEDORE [38/G/03]
CROMOGE	See FISHMOYNE [16/F/03]
CRONAMUCK	See CLOGHER [FINN] [01/C/06]
CRONANTY BURN	See CRONANIV BURN [38/C/06]
CROWAGH	See BUNCROWEY [35/B/09]
CRUMLIN [CORRIB]	See DOOGHTA [30/D/02]
CRUMPAUN (LAOIS)	See Killeen Stream (Douglas) (14/K/04)
CUCKOO STREAM	See MAYNE [09/M/03]
CULLEEN	See LEAFFONY [34/L/01]
CULLENAGH	See INAGH [ENNISTYMON] [28/I/01]
CULLYHANNA	See CASTLETOWN [06/C/01]
CULLY STREAM	See SMALL (25/S/05)
CURMEEN STREAM	See CLYDA [18/C/02]
CUSH	See Triogue [14T01]7

Alternative River Names [Continued]

River Name

River Name Adopted in Report

CUSHALING	See FIGILE [14/F/01]
DANGAN	See KNIGHTSBROOK [07/K/02]
DANGANSALLAGH	See FINNOW [FOHERISH] [19/F/01]
DEANSGRANGE STREAM	See KILL OF THE GRANGE STREAM [10/K/02]
DERRY [ROCHFORTBRIDGE]	See ROCHFORTBRIDGE STREAM [07/R/04]
DERRYPATRICK	See BOYCETOWN [07/B/03]
DERRYRAANE	See O'CALLAGHANSMILLS [27/O/03]
DININ [BARROW]	See BLACK [BORRIS] [14/B/06]
DONARD BROOK	See BROWNS BECK BROOK [12/B/03]
DOONANALLA	See OWENNAYLE (26/O/05)
DOOYERTHA	See RAFORD [29/R/01]
DRUMSILLAGH	See Mountrice 25/M/03
DUNDONNELL STREAM	See KILLEGLAN [26/K/04]
DUNKELLIN	See KILCOLGAN [29/K/01]
DURRUS	See FOUR MILE WATER [21/F/02]
EEL WEIR STREAM	See KILTACLARE STREAM [26/K/06]
FINSHENAGH STREAM	See CLONSHIRE [24/C/03]
FORKHILL	See KILCURRY [06/K/02]
FRIAR'S LOUGH STREAM	See LORRHA STREAM [25/L/05]
FUARAWN	See CLAREEN STREAM (25C13)
FURROOR	See INCH [CLARE] [27/I/01]
GALLANAGH STREAM	See CONAWARY [03/C/02]
GARRA	See DRUMCONRATH [06/D/04]
GEESLAUN	See POLLAGH [34/P/01]
GLANAGEENTY	See LITTLE MAINE [22/L/02]
GLANMORE	See CROANSHAGH [21/C/05]
GLASHA (LAOIS)	See DUNRALLY STREAM [14D05]
GLASHA STREAM (BARROW)	See LEVITSTOWN STREAM (14/L/02)
GLENDREE	See CLOGHAUN [25/C/07]
GLENEELY	See CULDAFF [40/C/02]
GLENGLOSH	See BEALANABRACK [30]
GLENMALURE	See AVONBEG [10/A/04]
GLENNADEEGAN	See TARSAGHAUNMORE [33/T/01]
GLENOMRA	See BROADFORD [27/B/02]
GLENNTOGHER	See DONAGH [40/D/01]
GLENUMMERA	See BUNDORRAGHA [32/B/01]
GLOREEN	See BALLYROAN [15/B/01]
GORT	See CANNAHOWNA [29/C/01]
GORTLOUGHRA	See OWVANE [CORK] [21/O/07]
GRAIGUE	See AWBEG [BUTTEVANT] [18/A/05]
GRANGE [ROSCOMMON]	See OWENUR [26/O/06]
GREYGROVE	See DOONBEG [28/D/02]
HARTWELL STREAM	See RATHMORE STREAM [09/R/02]
HOLLYMOUNT	See MOYREE [27/M/02]
INCHALUGHOGHE	See OWENOGARNEY [27/O/01]
IRE	See ISKE SULLAS (16/I/01)
ISKULE STREAM	See ALLAGHAUN [23/A/01]
IVALE	See RATHCOOL [18/R/01]
KEELOGYBOY STREAM	See WILLSBOROUGH STREAM [35/W/01]
KERRY	See GLENGARRIFF [21/G/03]
KILGORMAN	See INCH [WEXFORD] [11/I/01]
KILL [LIFFEY]	See PAINESTOWN [09/P/01]
KILLACLOGHER	See ABBERT [30/A/01]
KILLEEN STREAM	See MILLTOWN STREAM [12/M/02]
KILLEGAR	See CULLIES [36/C/03]
KILLEGAR STREAM	See LAHEEN STREAM [36/L/02]
KILLIMOR	See KILCROW [25/K/01]
KILLINAPARSON STREAM	See COUNTY [LAOIS/OFFALY] [25/C/21]
KILLORAN	See KILCROW [25/K/01]
KILMAINHAM	See DEE [06/D/01]
KILMALEY	See INCH [CLARE] [27/I/01]
KILMASHOGHE	See OWENADOHER [09O01]

Alternative River Names [Continued]

River Name

River Name Adopted in Report

KILTHA	See WOMANAGH [19/W/01]
KILWARDEN	See KINNEGAD [07/K/01]
LABBADISH	See LESLIE HILL STREAM [39/L/05]
LAGAN	See GLYDE [06/G/02]
LATOON	See RINE [27/R/01]
LAVALLY	See CLARINBRIDGE [29/C/02]
LEGAN STREAM	See LENAMORE STREAM [26/L/06]
LISFARRELL STREAM	See CLOONCOOSE STREAM [26/C/20]
LOUGH ALICK STREAM	See CORROY [34/C/06]
LOUGH TALT	See EIGHNAGH [34/E/01]
LOUGHEA	See GRANNEY [SHANNON] [25/G/04]
LOUGHINN	See GLENNAGANNON [40/G/01]
MEENATOMISH	See CRANA [39/C/02]
MILL [GALWAY]	See CLARINBRIDGE [29/C/02]
MOANAHA	See NENAGH [25/N/01]
MOINEEN	See BISHOP'S LOUGH STREAM [26/B/13]
MONGAGH	See CASTLEJORDAN [07/C/04]
MOONEEN	See BUNOW [25/B/25]
MOYNALVY	See KNIGHTSBROOK [07/K/02]
MUINGERROON NORTH STREAM	See BELLANABOY [33/B/07]
MULKEAR [TIPPERARY]	See NEWPORT [TIPPERARY] [25/N/02]
MULLAHEERA	See DEEL [NEWCASTLEWEST] [24/D/02]
NEWBRIDGE	See CULLIES [36/C/03]
OILTIAGH BROOK	See KNICKEEN [12/K/01]
OULYSALLIS	See DIRTY [20/D/01]
OWBAUN	See OWBEG [ROUGHTY] [21/O/02]
OWENABINDERG	See STRAID [40/S/01]
OWENACHARRA	See INNY (26/I/01)
OWENAGLAGGIN	See NAD [18/N/01]
OWENALTDERRY	See RAY [38/R/01]
OWENBEAGH	See OWENVEAGH [38/O/14]
OWENBEG [CALABBER]	See CALABBER [38/C]
OWENBEG [NORE]	See OWVEG [NORE] [15/O/01]
OWENBOY [COOLANEY]	See OWENBEG [COOLANEY] [35/O/01]
OWENCAM	See CULDAFF [40/C/02]
OWENDUFF [SLIGO]	See DUNNEILL [35/D/06]
OWENGARR	See BUNDORRAGHA [32/B/01]
OWENINY	See OWENMORE [MAYO] [33/O/04]
OWENKILLEW	See MILL [DONEGAL] [39/M/02]
OWENMORE [BALLINA]	See GLENREE [34/G/01]
OWENMORE [CLIFDEN]	See RECESS [31/R/01]
OWENMORE [CLOONAGHMORE]	See CLOONAGHMORE [34/C/03]
OWENMORE [ERRIFF]	See ERRIFF [32/E/01]
OWENNASHRONE	See LEE [CORK] [19/L/03]
OWENROE [MOYNALTY]	See Moynalty (07M03)
OWENROE [OWENTOCKER]	See OWENTOCKER [38/O/06]
OWENYKEEVAN	See FINNED [35/F/01]
PARK	See NADREEGEEL LOUGH STREAM [07/N/01]
POLLARDSTOWN STREAM	See CLONCUMBER STREAM [14C17]
POULANEIGH	See BREAGAGH [TIPPERARY] [16/B/03]
QUIN	See RINE [27/R/01]
RAMPART	See BLACKWATER [KELLS] [07/B/01]
RAMPART STREAM	See NEWMARKET STREAM [18/N/02]
RATHROE	See BREAGHWY [34/B/06]
RATTY	See OWENOGARNEY [27/O/01]
RIVERSTOWN	See BIG [LOUTH] [06/B/01]
ROSNAMUCKYDUFF	See BELLAWADDY [34/B/05]
SCARDAN	See OWENMORE [MANORHAMILTON] [35/O/02]
SCARRIFF	See GRANNEY 25/G/04
SCRAMOGE [SOUTH]	See LISSAPHOBLE [26/L/04]
SHANOW	See BRICK [23/B/03]
SHANOWEN [DONEGAL]	See DUNTALLY [38/D/03]

Alternative River Names [Continued]

River Name

River Name Adopted in Report

SHEAN	See SHEEN [21/S/01]
SHIVEN [NORTH]	See KILLIAN [26/K/01]
SKIVILEEN	See CREEGH [28/C/02]
SLIEVENOHERA	See KILLEENGARRIFF [25/K/02]
SOOLVANE	See FARNEYBRIDGE [16/F/02]
SRUELL	See EANYMORE WATER [37/E/02]
SRUHANACROW MORE	See SHALLOGAN [38/S/03]
STONESTOWN	See STONYFORD [07/S/02]
STRANAGARTAN STREAM	See GLEN [CARRICK] [37/G/01]
TICKNOCK STREAM	See TEMPLERAINY STREAM [10/T/04]
TIMOGUE	See CROOKED [STRADBALLY] 14C02
TIMAHOE	See STRADBALLY [14S02]
TOGHER	See DOUGLAS [BRIDE] [18/D/02]
TOMEEN	See RINE [27/R/01]
TOOR BROOK	See LEMONSTOWN STREAM [09/L/03]
TOOREEN	See COOLEEN [28/C/05]
TOORMORE (Mayo)	See CASTLEBAR [34/C/01]
TRAMORE [CORK]	See DOUGLAS [LEE] [19/D/05]
TREMBLESTOWN	See ATHBOY [07/A/01]
TROUGH	See BLACKWATER [CLARE] [25/B/06]
TUAM	See NANNY [TUAM] [30/N/01]
TULLYVALLAN	See CASTLETOWN [06/C/01]
TURRA	See BOLEYNEENDORRISH [29/B/04]
TWO MILE WATER	See ABBEY [36/A/01]
WHITE [LIMERICK]	See OWVANE [LIMERICK] [24/O/02]
WHITEHOUSE	See STRAID [40/S/01]

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