

*Water Quality -
Bathing Water Report*

ENVIRONMENT AGENCY



010267

1998

BATHING WATERS REPORT WALES

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1998 Bathing Waters Report Wales

Since the publication of the **1998 Bathing Waters Report**, we have subsequently discovered mistakes in table 4, Compliance of Non-Identified Bathing Waters with "I" and "G" Values in 1998. These mistakes have now been amended and the new replacement table is attached.

We have also noted a mistake in Table 1, Compliance of Identified Bathing Waters with "I" and "G" Values in 1998, on page 10, line 4. Southerndown's number of positive results for Salmonella should read 0 instead of 2.

We apologise for these mistakes and any inconvenience it may of caused.

Yours faithfully

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Table 4.

Compliance of Non-Identified Bathing Waters with "I" and "G" Values in 1998

(G=Guideline and Imperative pass; I=Imperative pass; F= Imperative fail)

	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
1	Penarth Yacht Club	20	1	19	I	20	1	20	I	20	18	F	I
2	Bendricks Beach	20	0	9	I	20	0	13	I	20	3	F	I
3	Watchouse Bay	20	0	11	I	20	0	16	I	20	6	F	I
4	Fontygary Bay	20	0	3	G	20	0	14	I	20	2	G	I
5	Limpert Bay	20	0	1	G	20	1	4	G	20	2	G	G
6	Llantwit Major Beach	20	0	9	I	20	0	12	I	20	5	F	I
7	Newton Bay	20	0	9	I	20	0	12	I	20	5	F	I
8	Aberafan East	21	2	8	F	21	4	15	F	21	5	F	F
9	Jersey Marine East	20	0	10	I	20	0	18	I	20	8	F	I
10	Jersey Marine Central	20	1	10	I	20	2	16	F	20	7	F	F
11	Jersey Marine West	22	0	10	I	22	1	16	I	21	6	F	I
12	Swansea Bay County Hall	21	1	15	I	21	2	17	F	21	10	F	F
13	Swansea Bay Sketty Lane	21	5	16	F	21	8	18	F	21	17	F	F
14	Swansea Bay Black Pill	21	1	16	I	21	4	17	F	21	13	F	F
15	Mumbles Knap Rock	21	1	14	I	21	1	16	I	21	8	F	I
16	Mumbles Head Pier	21	0	18	I	21	0	19	I	21	12	F	I

	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
17	Brandy Cove	21	0	3	G	20	0	8	I	21	2	G	I
18	Pwlldu	21	0	4	G	21	0	6	I	21	3	F	I
19	Three Cliffs Bay	20	0	5	I	20	2	7	F	20	5	F	F
20	Broughton Beach	21	1	4	G	20	2	6	F	19	3	F	F
21	Llanelli Beach	21	0	7	I	21	0	12	I	21	1	G	I
22	Burry Port Beach	22	0	4	G	22	0	2	G	22	3	F	I
23	St Ishmael	20	0	11	I	20	1	11	I	20	2	G	I
24	Llanstephen Beach	20	1	10	I	20	2	11	F	20	4	F	F
25	Ferryside Beach	20	4	16	F	20	2	15	F	20	8	F	F
26	Morfa Bychan (Pendine)	20	1	4	G	20	0	7	I	20	4	F	I
27	Wisemans Bridge	20	0	3	G	20	1	9	I	20	4	F	I
28	Coppett Hall Beach	21	0	1	G	21	0	6	I	21	3	F	I
29	Monkstone Beach	19	0	0	G	20	0	2	G	19	1	G	G
30	Tenby St. Catherines	20	0	1	G	20	0	3	G	20	4	F	I
31	Priory Bay, Caldy Island	21	0	1	G	21	0	4	G	20	2	G	G
32	Freshwater East	20	0	0	G	20	0	3	G	20	3	F	I
33	Barafundle	20	0	0	G	20	0	0	G	20	1	G	G
34	Freshwater West	20	0	0	G	20	0	1	G	20	1	G	G
35	West Angle	20	0	2	G	20	0	6	I	20	4	F	I

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	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
36	Gelliswick	20	0	6	I	19	0	7	I	19	3	F	I
37	Sandy Haven	20	0	2	G	19	0	3	G	19	2	F	I
38	Dale	20	0	1	G	19	0	7	I	19	1	G	I
39	Watwick	20	0	1	G	19	0	1	G	19	0	G	G
40	Westdale	20	0	0	G	19	0	0	G	19	0	G	G
41	Martins Haven	20	0	0	G	19	0	0	G	19	0	G	G
42	St. Brides Haven	20	0	4	G	19	0	4	I	19	2	F	I
43	Little Haven	20	0	4	G	20	0	9	I	20	7	F	I
44	Nolton Haven	20	0	5	I	20	0	6	I	20	5	F	I
45	Abereiddy	20	0	0	G	20	0	1	G	20	1	G	G
46	Traethllyn	20	0	0	G	20	0	0	G	20	0	G	G
47	Abermawr	20	0	2	G	20	0	5	I	20	1	G	I
48	Goodwick Harbour	20	0	1	G	20	0	3	G	20	0	G	G
49	Goodwick Beach	20	0	2	G	20	0	5	I	20	3	F	I
50	Pwll Gwaelod	20	2	9	F	20	2	15	F	20	5	F	F
51	Cwm yr Eglwys	20	0	5	I	20	0	7	I	20	7	F	I
52	Newport Sands South	20	0	4	G	20	0	9	I	20	4	F	I
53	Patch	20	3	18	F	20	6	17	F	20	10	F	F

	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
54	Mwnt at Aberporth	20	0	1	G	20	0	3	G	20	3	F	I
55	Aberporth E	21	0	5	I	21	0	6	I	21	6	F	I
56	Penbryn	20	0	3	G	20	1	4	G	20	3	F	I
57	Cil Borth	20	0	4	G	20	0	7	I	20	5	F	I
58	Cwmtudu	20	0	6	I	20	0	11	I	20	5	F	I
59	Newquay N	20	1	3	G	20	1	4	G	20	4	F	I
60	Llanina	20	2	8	F	20	3	12	F	20	5	F	F
61	Little Quay (Cei Bach)	20	0	4	G	20	1	5	I	20	3	F	I
62	Gillach yr Halen	21	1	5	I	22	0	10	I	21	6	F	I
63	Aberaeron S	21	0	1	G	22	0	3	G	21	3	F	I
64	Aberaeron N 4th Groyne	20	0	5	I	22	1	9	I	20	4	F	I
65	Aberaeron N of outfall	21	1	5	I	22	1	13	I	21	5	F	I
66	Aberarth	21	0	4	G	22	0	9	I	21	8	F	I
67	Llanon	20	1	7	I	20	0	9	I	20	8	F	I
68	Llansantffraid	20	0	3	G	20	0	4	G	20	2	G	G
69	Llanrhystud S	20	0	1	G	21	0	3	G	20	4	F	I
70	Ynyslas	19	0	1	G	20	0	2	G	19	2	F	I
71	Ynyslas Estuary	19	1	9	F	20	1	12	I	19	3	F	F
72	Garreg Wen	19	5	16	F	19	7	18	F	19	12	F	F

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	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
73	Criccieth E	19	0	2	G	19	1	6	F	19	2	F	F
74	Morfa Abererch	20	1	2	G	20	1	5	I	20	2	G	I
75	Llanbedrog	20	0	3	G	20	0	7	I	20	5	F	I
76	Porth Neigwl	20	0	0	G	20	0	0	G	20	0	G	G
77	Aberdaron	20	0	2	G	20	0	3	G	20	0	G	G
78	Porth Nefyn	20	0	3	G	20	0	5	I	20	4	F	I
79	Traeth Mawr, Aberffraw	20	0	4	G	20	0	10	I	20	3	F	I
80	Porth Trecastell	20	0	3	G	20	0	7	I	20	0	G	I
81	Porth Nobla	20	0	0	G	20	0	0	G	20	0	G	G
82	Porth Tyn Tywyn Llanfaelog	20	0	0	G	20	0	0	G	20	0	G	G
83	Traeth Crigyll, Rhosneigr	20	1	5	I	20	1	8	I	20	5	F	I
84	Silver Bay	20	0	0	G	20	0	1	G	20	0	G	G
85	Borth Wen	20	0	1	G	20	0	4	G	20	3	F	I
86	Newry Beach, Holyhead	20	0	3	G	20	0	5	I	20	4	F	I
87	Sandy Beach	20	1	1	G	20	0	1	G	20	1	G	G
88	Porth Trefadog	16	1	3	F	16	2	4	F	16	3	F	F
89	Porth Trwyn	20	1	3	G	20	1	4	G	20	2	G	G
90	Church Bay	20	0	1	G	20	0	2	G	20	1	G	G

	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
91	Cemlyn	20	0	1	G	20	0	1	G	20	0	G	G
92	Traeth Bach, Cemaes Bay	20	0	11	I	20	1	13	I	20	8	F	I
93	Porth Eilian	20	1	4	G	20	2	7	F	20	6	F	F
94	Traeth Llugwy	20	2	5	F	20	2	7	F	20	6	F	F
95	Moelfre	20	2	9	F	20	2	12	F	19	5	F	F
96	St. Davids, Benllech	20	0	0	G	20	0	2	G	20	4	F	I
97	Penmon	20	0	2	G	20	0	2	G	20	1	G	G
98	Beaumaris	20	1	3	G	20	1	10	I	20	5	F	I
99	Pentraeth	8	2	6	F	8	2	5	F	8	6	F	F
100	Port Dinorwic	21	0	9	I	21	0	13	I	21	6	F	I
101	Plas Menai	21	2	9	F	21	1	11	I	21	4	F	F
102	Llanfairfechan	20	2	6	F	20	3	11	F	20	6	F	F
103	Morfa Conwy	20	0	5	I	20	0	11	I	20	2	G	I
104	Deganwy N Shelter	20	0	7	I	20	1	15	I	20	7	F	I
105	Penrhyn Bay	20	4	18	F	20	6	18	F	20	10	F	F
106	Rhos Road, Colwyn Bay	20	0	4	G	20	0	14	I	20	3	F	I
107	Penrhos, Colwyn Bay	20	0	8	I	20	1	13	I	20	9	F	I
108	Colwyn Bay	20	0	7	I	20	0	11	I	20	5	F	I
109	Old Colwyn	20	0	3	G	20	0	9	I	20	4	F	I

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	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
110	Llanddulas	20	0	9	I	20	3	17	F	20	9	F	F
111	Abergele	20	0	9	I	20	1	11	I	20	5	F	I
112	Towyn	20	0	6	I	20	0	12	I	20	2	G	I
113	Splash Point	20	0	6	I	20	0	11	I	20	6	F	I
114	Ffrith Beach	20	0	6	I	20	0	12	I	20	5	F	I
115	Barkby Beach	20	0	2	G	20	0	11	I	20	4	F	I
116	Point of Ayr	20	1	4	G	20	0	9	I	20	2	G	I

ENVIRONMENT AGENCY WALES

1998 BATHING WATER SURVEY

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ENVIRONMENT AGENCY WALES
1998 BATHING WATER SURVEY

1. BACKGROUND

- 1.1 The Environment Agency (the Agency) was created on April 1 1996, as an amalgamation of the National Rivers Authority (NRA), Her Majesty's Inspectorate of Pollution (HMIP), the Waste Regulation Authorities and some functions of the Department of the Environment, Transport and the Regions (DETR).
- 1.2 EC Directives are agreements between the EC and Member States. Thus the interpretation of them at national level, their adoption into national law, and accountability for compliance with the terms of the directives, lies entirely with National Governments.
- 1.3 The EC Bathing Waters Directive (76/160/EEC) was intended primarily to safeguard public health and the environment by reducing the pollution of bathing waters and protecting such waters against further deterioration. Under the Water Act 1989, the Environment Agency has inherited the responsibility of carrying out the necessary monitoring programmes in relation to certain water-related directives, which include the Bathing Water Directive, in England and Wales. The results from these monitoring programmes in Wales are submitted to the Welsh Office (WO) and the Department of Transport, Environment and the regions (DETR). It is for such Government Departments, however, to interpret this and other such EC Directives within England and Wales, and it follows from the preceding paragraph that only they can assess 'compliance' or otherwise with the Directives.
- 1.4 When Directive 76/160/EEC was first adopted, only a limited number of bathing waters were identified by the UK Government. A large list of bathing waters has since been added to the initial list and all these are included in the Government's report to the EC. If bathing waters are not included in that report then they do not come within the terms of the Directive and thus, by definition, cannot be said to comply, or fail to comply, with its conditions. However, a number of non-identified bathing waters have in the past been routinely monitored by one of the Agency's predecessors, the NRA, and the results included in this report for comparison.
- 1.5 The NRA decided to cease all non-EC bathing water monitoring from 1994 because it considered that it had sufficient information to characterise these waters. The only exceptions to this are any bathing waters nominated by local councils for consideration for EC Directive "identification". However, in Wales, to enable local councils to continue to apply for the various Bathing Beach awards at non-EC bathing waters, an initiative, now co-ordinated by the Environment Agency and involving the Welsh Office, Wales Tourist Board, Dwr Cymru Welsh Water (DCWW), Hyder Environmental and the maritime local authorities, has been set up to collect the necessary data. 1998 was the fifth year of this initiative, the results of which are included in this report. It is hoped that the initiative will continue next year, further details of which are given in section 4.

- 1.6 The Directive specifies a range of water quality standards that should be achieved in identified bathing waters and indicates the required monitoring frequency. These standards fall into two categories, mandatory / imperative (I) and guideline (G) standards. Details of the requirements for compliance with these are given in Appendix 1.
- 1.7 The Bathing Waters (Classification) Regulations 1991 were published as a Statutory Instrument on 9th August 1991, bringing the regulations into UK law. The "Notice" and "Directions" were received in 1992.
- 1.8 The Government currently uses the faecal and total coliforms "I" standards as the basis for determining UK compliance with the Directive. Additional microbiological "I" standards concern the occurrence of Salmonella and Enteroviruses. Physico-chemical "I" standard parameters are tested as indicated in Appendix 1. The occurrence of Faecal Streptococci is also examined, although this parameter only has a non-mandatory "G" standard in the Directive. Environment Agency Wales has been granted a derogation for transparency (see Appendix 1) at all its bathing waters from 1991.
- 1.9 Compliance with the "G" standards is **not** mandatory but the Directive states that Member States should "endeavour" to observe them as guidelines. The "G" standard compliance requirements are specified in Appendix 1.

2. SAMPLING PROGRAMME

- 2.1 The 68 bathing waters reported for Wales in 1998 which are currently identified by the UK Government as falling within the scope of the Directive are displayed on Figure 1 and listed in Appendix 2. This also shows West Kirby, which is under Environment Agency Wales operational control but lies outside Wales.
- 2.2 The Government requires that these bathing waters are monitored in accordance with the requirements of the Bathing Waters Directive and the data is reported to the WO and DETR during October of each year. This report summarises the results of the monitoring carried out during the 1998 bathing season.
- 2.3 The non-identified bathing waters included in the initiative described in section 1.5 and monitored by the local authorities are displayed in Figure 2 and listed in Appendix 3.
- 2.4 A summary poster on the current status of Directive 76/160/EEC compliance in England and Wales was published in February 1999 by the Environment Agency.

3 1998 MONITORING PROGRAMME FOR BATHING WATERS IDENTIFIED AS FALLING WITHIN THE TERMS OF THE BATHING WATERS DIRECTIVE

- 3.1 Monitoring is confined to the period 1st May - 30th September, which includes two weeks sampling prior to the DETR identified bathing season (15 May - 30th September).
- 3.2 Guidance has been issued by DETR indicating the frequency of monitoring required for each parameter. This guidance has been used to develop the monitoring programme within Wales. DETR specified that faecal streptococci, faecal and total coliforms should be analysed on at least 20 occasions during the bathing season. Since 1992 the reported faecal and total coliform results have been "confirmed"* instead of the "presumptive" results which had been reported in previous years. The need for enterovirus and salmonella sampling is determined using a 'trigger' involving weekly aesthetic surveys of each beach to determine if any deterioration could be due to the presence of sewage pollution. Those which fail the 'trigger' are sampled twice for enterovirus and salmonella in addition to the beaches that had failed to achieve the faecal/total coliform standards during the previous year. Details of this "trigger" are contained in Appendix 4.

pH is only required to be measured once during the season and the physicochemical parameters are assessed on 20 occasions during the bathing season.

- 3.3 Table 1 shows compliance of identified bathing waters with faecal and total coliforms "I" & "G" standards and with faecal streptococci "G" standards as reported by WO/DETR in 1998. The number of samples taken at each beach, the number of failures against "I" and "G" standards and the compliance ("G" guideline and imperative, "I" imperative or "F" failure) are given for each determinand at each beach. As well as compliance with each determinand the table shows the overall compliance of the beach. The table also shows a summary of Salmonella and Enterovirus sampling including the number of samples taken, the number of positive Salmonella results and the minimum and maximum Enterovirus values in Plaque Forming Units per 10 litres (PFU/10L). At beaches where Salmonella and Viruses have been sampled, letters a to f indicate the reasons for sampling. A key below the table explains these reasons.
- 3.4 Table 2 shows compliance of identified Bathing Waters with "T" standards for Faecal and Total Coliforms from 1986 to 1998. In addition, Table 2 indicates those bathing waters which are included in the DCWW investment programme designed to meet compliance by the UK with its obligations under the EC Bathing Waters Directive.
- 3.5 Table 3 shows compliance of identified Bathing Waters with "G" standards for Faecal Streptococci, Faecal and Total Coliforms from 1990 to 1998 as reported by WO/DETR. This is the water quality standard required for Blue Flag compliance. The results are also summarised in section 7.

* confirmed refers to the confirmation of the coliform test which requires further analysis of all samples to substantiate the result.

4. 1998 MONITORING PROGRAMME FOR BATHING WATERS NOT IDENTIFIED UNDER THE TERMS OF THE BATHING WATERS DIRECTIVE

- 4.1 The NRA ceased monitoring non-identified waters from 1994 but co-ordinated an initiative to help to ensure that the necessary data was available to enable local councils to nominate waters for Bathing Water awards. The initiative is funded by Wales Tourist Board, Dwr Cymru, and the Welsh Office, with Hyder Environmental carrying out most of the analyses at cost price. Local councils carried out the sampling to Agency specifications. Cardiganshire, Pembrokeshire and Anglesey Councils wanted more sites monitored than could be included in the scheme so they independently contracted Hyder to carry out the analyses. Swansea Council did not take part in this initiative although they collected samples and had them analysed at Swansea Public Health Laboratory, as in previous years.

A total of 116 non-identified bathing waters in Wales were monitored during 1998. These results have been reported to the Welsh Office. Due to limited resources it was not possible to report "confirmed" faecal and total coliform results for all samples. Most of the samples, which exceeded the 2000/100ml faecal coliform standard or the 10000/100ml total coliform standard, were "confirmed".

- 4.2 Table 4 shows compliance of the Non-EC identified Bathing Waters with Faecal and Total Coliform "I" and "G" standards and with Faecal Streptococci "G" standards in 1998. The number of samples taken at each beach, the number of failures against "I" and "G" standards and the compliance ("G" guideline and imperative, "I" imperative or "F" failure) are given for each determinand at each beach. As well as compliance with each determinand the table shows the overall compliance of the beach.
- 4.3 Tables 5 & 6 show compliance of Non-EC identified Bathing Waters with "I" and "G" standards respectively. Table 5 shows compliance with "I" standards for Faecal and Total Coliforms from 1986 to 1998 and table 6 show compliance with "G" standards for Faecal Streptococci, Faecal and Total Coliforms from 1990 to 1998. The results are also summarised in section 7.

5 BLUE FLAG AND SEASIDE AWARDS

- 5.1 The European Blue Flag Scheme is organised by the Federation of Environmental Education in Europe (FEEE). In Wales it is administered by the charity Keep Wales Tidy (KWT) part of the Tidy Britain Group (TBG). European Blue Flags are only awarded to those EC identified beaches, where an application has been made by the local authority or another interested party and they meet the strict water quality and land-based requirements of the award scheme.

The water quality is judged on the results of the analyses of samples taken during the previous bathing season. The 1998 awards required compliance with "guideline" value water quality standards of the Directive for total and faecal coliforms and for faecal streptococci. In Wales Rest Bay, Port Eynon, Caswell Bay, Tenby North, Lydstep, Newgale, Whitesands Bay, Barmouth, Pwllheli South, Abersoch, Dinas Dinlle,

Llanddwyn and Llandonna were awarded Blue Flags in 1998.

- 5.2 The Seaside Award scheme was introduced in 1992 and is also administered by KWT. Both EC identified and other beaches are eligible for application of these awards. There are two categories of award, Resort and Rural, depending on whether the beach is part of a managed tourist resort or whether it is a smaller beach with limited facilities, but still has clean water.

Water quality is again judged on the results of the analyses of samples taken during the previous bathing season. In order to be eligible for a "Seaside Award", the beach must meet at least the mandatory or guideline standards for faecal and total coliforms, along with the specified land-based criteria. In 1998, 67 beaches in Wales received Seaside Awards.

6 REMEDIAL MEASURES REQUIRED TO MEET LONG TERM OBJECTIVE

- 6.1 The long-term objective is for all identified bathing waters to comply with the mandatory standards laid down in the Directive. In order to facilitate this the former NRA Welsh Region identified and prioritised the remedial works required at identified bathing waters to ensure that Dwr Cymru Welsh Water (DCWW) discharges were not the cause of failure of the faecal and total coliform standards by the end of 1995. This deadline was later relaxed to 1998 for Cardiff and 1999 for Swansea Bay areas. The works in these areas should result in improved treatment being provided at some DCWW discharges by the beginning of the 1999 Bathing Water season.

The necessary improvements have been one of the main drivers behind DCWW's investment programme during the last 5 years. Now these improvements are nearing completion, it is clear that in some cases other non DCWW discharges are causing problems for beach compliance.

It must be emphasised that compliance is considered an unreliable indication of trends due to the statistical limitations of such a small data set. Variation in compliance from year to year therefore does not necessarily indicate genuine improvements or deteriorations. There will always be some beaches which change their status because they are marginal failures or passes.

6.2 Green Sea Initiative

This initiative is co-ordinated by the Wales Tourist Board and comprises membership by those bodies with an interest in bathing water quality in Wales. This includes Local Councils, Industry including the water company DCWW, local environmental groups, Countryside Commission for Wales (CCW), the Environment Agency along with several others.

The overall objective is to work together to improve the coastal environment. This obviously includes water quality around the Welsh coast. The organisation was formed in 1995 and has, as an overall objective, a target of 50 Blue Flags (guideline water quality) at beaches around Wales.

6.3 Green Coast Development

The Green Coast is a new environmental award which was piloted at nine beaches throughout Wales during 1998. The award is backed by the Green Sea partnership, and is currently being developed by the Keep Wales Tidy Campaign. The aim of the award is to recognise those beaches of high environmental quality, without the level of infrastructure and intensive management generally associated with more urban, traditional seaside resort beaches. In order to receive the award, beaches must attain guideline water quality, and have effective and appropriate management, to ensure protection of the natural environment. Pilot beaches in Wales were Marloes, Manorbier, Barafundle, Caerfai, Rhossilli, Porth Neigwl, Church Bay, Porth Nobla and Cemlyn Bay.

7. SUMMARY TABLE OF RESULTS

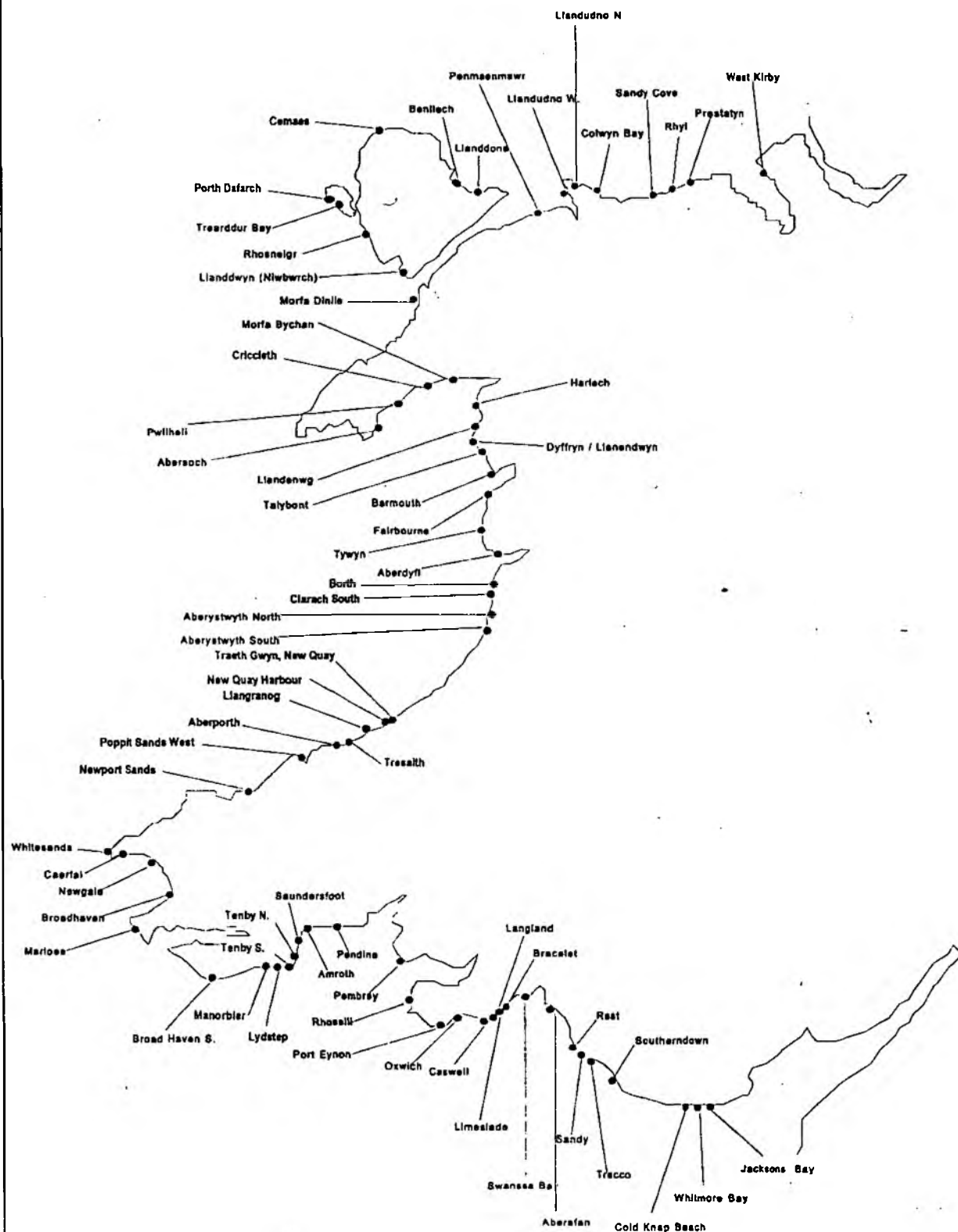
Summary table showing compliance with the faecal and total coliform and faecal streps standards

Bathing Water		Number	"I" standard Compliance	Percent	"G" standard Compliance	Percent
EC	Wales	68	64	94.1	25	36.8
	Wales and West Kirby	69	65	94.2	26	37.7
NON EC	Wales	116	92	79.3	22	19

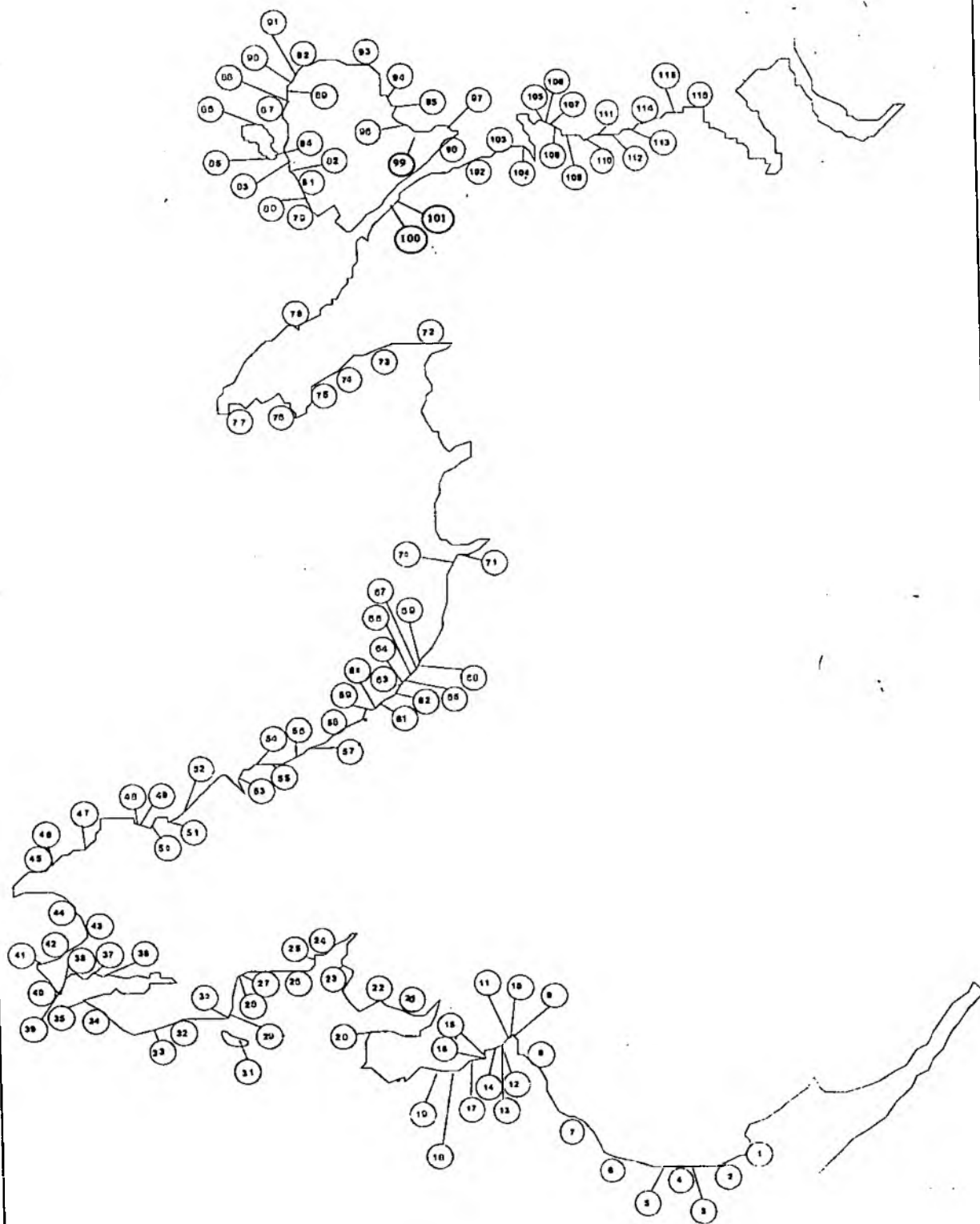
Note: "I" and "G" standards are explained in appendix 1.

All samples were "confirmed" for identified waters, but at non-identified waters only those samples which exceeded the 2000/100ml faecal coliform standard or the 10000/100ml total coliform standard were "confirmed", with the exception of Swansea Bay.

Location of Identified Bathing Water Sampling Sites in 1998



Location of Non-Identified Bathing Water Sampling Sites in 1998



LIST OF BATHING WATERS FOR FIGURE 2

1	Penarth Yacht Club	56	Penbryn	110	Landulas
2	Bendricks Beach	57	Cil Borth	111	Abergele
3	Watchouse Bay	58	Cwmtudu	112	Towyn
4	Fontygary Bay	59	Newquay N.	113	Splash Point, Rhyl
5	Limpert Bay	60	Llanina	114	Ffrith Beach
6	Llantwit Major Beach	61	Little Quay(Cei Bach)	115	Barkby Beach, Prestatyn
7	Newton Bay	62	Gilfach yr Halen	116	Point Of Ayr
8	Aberafan East	63	Aberaeron S.		
9	Jersey Marine East	64	Aberaeron N. 4th Groyne		
10	Jersey Marine Central	65	Aberaeron N of Outfall		
11	Jersey Marine West	66	Aberarth		
12	Swansea Bay County Hall	67	Llanon		
13	Swansea Bay Sketty Lane	68	Llansantffraid		
14	Swansea Bay Black Pill	69	Llanrhystud S.		
15	Mumbles Knap Rock	70	Ynyslas		
16	Mumbles Head Pier	71	Ynyslas Estuary		
17	Brandy Cove	72	Garreg Wen		
18	Pwll Du	73	Criccieth E		
19	Three Cliffs Bay	74	Morfa Abererch		
20	Broughton Beach	75	Llanbedrog		
21	Llanelli Beach	76	Porth Neigwl		
22	Burry Port Beach	77	Aberdaron		
23	St Ishmael	78	Porth Nefyn		
24	Llanstephen Beach	79	Traeth Mawr, Aberffraw		
25	Ferryside Beach	80	Porth Trecastell		
26	Morfa Bychan (Pendine)	81	Porth Nobla, Llanfaelog		
27	Wisemans Bridge	82	Porth Tyn Tywyn		
28	Coppett Hall Beach		Llanfaelog		
29	Monkstone Beach	83	Traeth Crigyll, Rhosneigr		
30	St Catherines	84	Silver Bay		
31	Priory Bay, Caldey	85	Borth Wen		
32	Freshwater East	86	Newry Beach, Holyhead		
33	Barafundle	87	Sandy Beach		
34	Freshwater West	88	Porth Trefadog		
35	West Angle	89	Porth Trwyn		
36	Gelliswick	90	Church Bay		
37	Sandy Haven	91	Cemlyn		
38	Dale	92	Cemaes Bay		
39	Watwick	93	Porth Eilian		
40	West Dale	94	Traeth Llugwy		
41	Martins Haven	95	Moelfre		
42	St Brides Haven	96	St. Davids, Benllech		
43	Little Haven	97	Penmon		
44	Nolton Haven	98	Beaumaris		
45	Abereiddy	99	Pentraeth		
46	Traethllyn	100	Port Dinorwic		
47	Abermawr	101	Plas Menai		
48	Goodwick Harbour	102	Llanfairfechan Shore Rd		
49	Goodwick Beach	103	Morfa Conwy		
50	Pwll Gwaelod	104	Deganwy N. Shelter		
51	Cwm yr Eglwys	105	Penrhyn Bay		
52	Newport Sounds South	106	Rhos Road, Colwyn Bay		
53	Patch	107	Penrhos, Colwyn Bay		
54	Mwnt at Aberporth	108	Colwyn Bay		
55	Aberporth E	109	Old Colwyn		

Table 1. Compliance of Identified Bathing Waters with "I" & "G" Values in 1998 for Total Coliforms, Faecal Coliforms and Faecal Streps and results for Salmonella & Viruses
(G= Guideline and Imperative pass; I=Imperative pass; F= Imperative fail)

Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps			Overall Compliance G,I,F.	Salmonella		Viruses PFU / 10 l		
	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance		No. Samples	No. + ve Result	No. Samples	Min Value *	Max Value *
Jacksons Bay	20	0	10	I	20	0	16	I	20	7	F	I	2 (a)	1	1 (a)	<1	<1
Whitmore Bay	20	0	3	G	20	0	13	I	20	6	F	I	2 (a)	0	0		
Cold Knap	20	0	1	G	20	0	5	I	20	3	F	I	2 (e)	2	0		
Southerndown	20	0	4	G	20	0	12	I	20	1	G	I	2 (b)	2	2 (b)	<1	<1
Trecco Bay	20	0	2	G	20	0	8	I	20	2	G	I	2 (a)	1	0		
Sandy Bay	20	0	1	G	20	0	6	I	20	3	F	I	0	0	0		
Rest Bay	20	0	0	G	20	0	2	G	20	1	G	G	0	0	0		
Aberafan	20	1	5	I	20	1	14	I	20	4	F	I	0	0	0		
Swansea Bay	20	3	18	F	20	6	18	F	20	13	F	F	2 (a,b,c)	2	2 (a,b,c)	<1	3
Bracelet Bay	20	0	8	I	20	0	15	I	20	1	G	I	0	0	0		
Limeslade Bay	20	0	9	I	20	1	16	I	20	3	F	I	2 (a,b,c)	0	2 (a,b,c)	1	1
Langland Bay	20	0	8	I	20	1	12	I	20	4	F	I	0	0	2 (a)	<1	1
Caswell Bay	20	1	2	G	20	1	6	I	20	3	F	I	2 (a)	0	2 (a)	<1	<1
Oxwich Bay	20	0	0	G	20	0	2	G	20	0	G	G	2 (d)	1	0		
Port Eynon Bay	20	0	2	G	20	0	3	G	20	1	G	G	0	0	0		
Rhossili	20	0	1	G	20	0	2	G	20	0	G	G	0	0	0		
Pembrey	20	0	1	G	20	0	6	I	20	0	G	I	0	0	0		

Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps			Overall Compliance G,I,F.	Salmonella		Viruses PFU / 10 l		
	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance		No. Samples	No. + ve Result	No. Samples	Min Value *	Max Value *
Pendine	20	0	0	G	20	0	4	G	20	2	G	G	0	0	0		
Amroth	20	0	0	G	20	0	2	G	20	1	G	G	2 (b)	0	2 (b)	<1	1
Saundersfoot	20	0	0	G	20	0	3	G	20	0	G	G	0	0	0		
Tenby North	20	0	0	G	20	0	2	G	20	1	G	G	2 (a)	0	0		
Tenby South	20	0	0	G	20	0	0	G	20	1	G	G	2 (a)	1	0		
Lydstep N.	20	0	0	G	20	0	2	G	20	1	G	G	0	0	0		
Manorbier	20	0	0	G	20	0	2	G	20	1	G	G	0	0	0		
Broadhaven S.	20	0	0	G	20	0	2	G	20	1	G	G	0	0	0		
Marloes	20	0	0	G	20	0	0	G	20	0	G	G	2 (a)	0	0		
Broadhaven	20	0	2	G	20	1	6	I	20	3	F	I	2 (d)	0	0		
Newgale	20	0	1	G	20	0	1	G	20	2	G	G	2 (a)	1	0		
Caerfai	20	0	0	G	20	0	0	G	20	0	G	G	2 (a)	0	0		
Whitesands	20	0	0	G	20	0	3	G	20	1	G	G	0	0	0		
Newport North	20	0	2	G	20	0	8	I	20	1	G	I	2 (a)	0	2 (a)	<1	<1
Poppit Sands	20	0	7	I	20	2	10	F	20	3	F	F	0 (e)	0	0 (e)		
Aberporth	20	0	2	G	20	0	4	G	20	3	F	I	0	0	0		
Tresaith	20	0	0	G	20	0	5	I	20	0	G	I	0	0	0		
Llangranog	20	0	11	I	20	0	17	I	20	14	F	I	0	0	0		
New Quay Harbour	20	0	2	G	20	0	4	G	20	1	G	G	0	0	0		
Traeth Gwyn New Quay	20	0	2	G	20	0	7	I	20	4	F	I	0	0	0		
Aberystwyth South	20	1	4	G	20	1	7	I	20	2	G	I	2 (a)	0	0		
Aberystwyth North	20	0	1	G	20	0	8	I	20	2	G	I	0	0	0		

Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps			Overall Compliance G,I,F.	Salmonella		Viruses PFU / 10 l		
	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance		No. Samples	No. + ve Result	No. Samples	Min Value *	Max Value *
South Clarach	20	1	8	I	20	1	13	I	20	6	F	I	0	0	0		
Borth	20	0	3	G	20	0	7	I	20	3	F	I	0	0	0		
Aberdyfi	20	0	5	I	20	0	10	I	20	1	G	I	0	0	0		
Tywyn	20	0	4	G	20	0	5	I	20	1	G	I	0	0	0		
Fairbourne	20	0	4	G	20	1	8	I	20	3	F	I	2 (c)	0	2 (c)	<1	1
Barmouth	20	0	3	G	20	0	4	G	20	0	G	G	0	0	0		
Talybont	20	0	0	G	20	0	4	G	20	0	G	G	0	0	0		
Dyffryn/Llanendwyn	20	0	1	G	20	0	5	I	20	0	G	I	0	0	0		
Llandanwg	20	0	11	I	20	0	10	I	20	5	F	I	0	0	0		
Harlech	20	0	2	G	20	1	5	I	20	2	G	I	0	0	0		
Morfa Bychan (Black Rock Sands)	20	0	3	G	20	0	6	I	20	0	G	I	0	0	0		
Criccieth	20	1	5	I	20	2	8	F	20	3	F	F	2 (a,c)	1	2 (a,c)	<1	<1
Pwllheli	20	0	0	G	20	0	1	G	20	2	G	G	0	0	0		
Abersoch	20	0	2	G	20	2	3	F	20	6	F	F	2 (c)	0	2 (c)	<1	1
Morfa Dinlle	20	0	2	G	20	1	4	G	20	1	G	G	2 (c)	0	2 (c)	<1	<1
Llanddwyn (Niwbwrch)	20	0	1	G	20	0	1	G	20	1	G	G	0	0	0		
Rhosneigr	20	0	1	G	20	0	3	G	20	0	G	G	0	0	0		
Trearddur Bay	20	0	1	G	20	0	3	G	20	1	G	G	0	0	0		
Porth Dafarch	20	0	2	G	20	0	0	G	20	1	G	G	0	0	0		
Cemaes Bay	20	0	7	I	20	0	13	I	20	5	F	I	0	0	0		
Benllech	20	0	6	I	20	0	8	I	20	2	G	I	2 (a)	0	0		

Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps			Overall Compliance G,I,F.	Salmonella		Viruses PFU / 10 l		
	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance		No. Samples	No. + ve Result	No. Samples	Min Value *	Max Value *
Llanddona	20	0	1	G	20	0	5	I	20	1	G	I	0	0	0		
Penmaenmawr	20	0	1	G	20	0	6	I	20	1	G	I	0	0	0		
Llandudno West Shore	20	0	6	I	20	0	11	I	20	4	F	I	0	0	0		
Llandudno North Shore	20	1	5	I	20	0	15	I	20	6	F	I	2 (c)	0	2 (c)	<1	<1
Colwyn Bay	20	0	7	I	20	0	14	I	20	7	F	I	0	0	0		
Sandy Cove	20	0	6	I	20	0	11	I	20	5	F	I	0	0	2 (a)	<1	<1
Rhyl	20	1	8	I	20	1	11	I	20	4	F	I	0	0	0		
Prestatyn	20	0	1	G	20	0	8	I	20	2	G	I	0	0	0		
West Kirby	20	0	1	G	20	0	1	G	20	1	G	G	0	0	2 (a)	<1	<1

Reasons for Virus and Salmonella Sampling

(a) Positive Salmonella or Virus Result in 1997

(b) Non-compliant with "I" standards in 1997

(c) Non-compliant with "I" standards in 1998

(d) Sewage Debris Trigger

(e) one failure of "I" standard - Although the guidance relating to failures during the current season stated that virus and salmonella sampling should be undertaken if two "I" failures occurred during the season, some sampling was instigated after one failure, before guidance was clarified.

(f) West Poppit failed the "I" standard in 1998. It was the last sample of the season making Virus and Salmonella sampling unpractical

* Reporting <1 rather than 0 is an indication of the fact that it cannot be guaranteed there were no viruses in the sample, because method efficiencies are never 100%. However <1 indicates no viruses were isolated.

Table 2.

Summary of Identified Bathing Waters sampled between 1986 and 1998.
Overall compliance with Imperative (I) standards for Faecal and Total Coliforms.

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98	Completion date in Dwr Cymru Prog.
Jacksons Bay	F	F	F	F	F	F	F	P	F	P	F	P	P	98
Whitmore Bay	F	F	F	F	F	P	F	P	F	P	P	P	P	98
Cold Knap	F	F	F	P	F	P	P	P	P	P	P	P	P	98
Southerndown	F	P	F	P	P	P	P	P	P	P	P	F	P	90
Trecco Bay	F	F	P	F	P	P	P	P	P	P	P	P	P	91
Sandy Bay	F	F	F	P	F	P	P	P	P	P	P	P	P	91
Rest Bay	F	P	P	P	P	P	P	P	P	P	P	P	P	91
Aberafan	F	P	P	P	P	P	P	P	P	P	P	P	P	2000
Swansea Bay	F	F	F	P	F	P	F	F	P	F	F	F	F	99
Bracelet Bay	P	P	P	P	P	P	P	P	P	P	P	P	P	99
Limeslade Bay	F	F	P	F	P	P	P	P	F	P	P	F	P	99
Langland Bay	F	P	P	F	P	P	P	F	P	P	P	P	P	99
Caswell Bay	P	F	P	P	P	P	F	P	P	P	P	P	P	99
Oxwich Bay	P	P	P	P	P	P	P	P	P	P	P	P	P	99
Port Eynon Bay	P	P	P	P	P	P	P	P	P	P	P	P	P	
Rhossili	F	P	P	P	P	P	P	P	P	P	P	P	P	97
Pembrey	P	P	P	P	P	P	P	P	P	P	P	P	P	
Pendine	P	P	P	P	P	P	P	P	P	P	P	P	P	
Amroth	F	F	P	P	P	P	P	P	P	P	P	F+	P	97
Saundersfoot	P	F	P	P	F	P	P	P	F	P	P	P+	P	97
Tenby North	P	F	F	P	P	P	P	P	P	P	P	P+	P	97
Tenby South	F	P	P	P	P	P	P	P	P	P	P	P+	P	97
Lydstep North												P	P	
Manobier												P	P	97
Broad Haven South												P	P	
Marloes												P	P	
Broadhaven	F	P	P	P	P	P	P	P	F	P	P	P+	P	99
Newgale	F	P	P	P	P	P	P	P	P	P	P	P	P	96

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98	Completion date in Dwr Cymru Prog.
Caerfai												P +	P	
Whitesands	P	P	P	P	P	P	P	P	P	P	P	P +	P	
Newport North	P	P	P	P	P	P	P	F	F	P	P	P	P	2000
Poppit Sands											P	P	F	99
Aberporth										P	P	P	P	95
Tresaith										P	P	P	P	95
Llangranog												P	P	97
New Quay Harbour													P	
Traeth Gwyn New Quay	P	P	P	P	P	P	P	P	F	P	P	P	P	95 and 2000
Aberystwyth South	F	F	P	P	F	P	F	F	F	P	P	P	P	95
Aberystwyth North	P	P	P	P	P	P	P	P	P	P	P	P	P	95
Clarach South													P	
Borth	P	P	P	P	P	P	P	P	P	F	P	P	P	
Aberdyfi					F	P	F	F	P	F	F	P	P	96
Tywyn	F	P	P	P	P	P	P	P	P	P	P	P	P	95
Fairbourne	P	P	P	P	P	P	P	P	P	P	P	P	P	post 2000
Barmouth	P	P	P	P	P	P	P	P	P	P	P	P	P	89 & post 2000
Talybont										P	P	P	P	
Dyffryn/Llanendwyn										P	P	P	P	
Llandanwg	P	P	P	P	P	P	P	P	P	P	P	P	P	99
Harlech	P	P	P	P	P	P	P	P	P	F	F	P	P	99
Morfa Bychan	F	F	P	P	P	P	F	P	F	P	P	P	P	
Criccieth	P	F	P	P	F	P	F	P	F	P	P	P	F	95
Pwllheli	P	P	P	P	P	P	P	P	P	P	P	P	P	97
Abersoch	P	P	F	P	P	P	P	P	P	P	P	P	F	
Morfa Dinlle			P	P	P	P	P	P	P	P	P	P	P	
Llanddwyn												P	P	
Rhosneigr					P	P	P	P	P	P	P	P	P	99
Trearddur Bay	F	F	P	P	P	P	P	P	P	P	P	P	P	91 and post 2000
Porth Dafarch													P	

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98	Completion date in Dwr Cymru Prog.
Cemaes Bay													P	99 / 2000
Benllech	P	F	P	P	F	F	P	P	P	P	P	P	P	92 & 97
Llanddona												P	P	
Penmaenmawr										F	P	P	P	2000
Llandudno West Shore	F	F	F	F	F	F	F	F	F	P	P	P	P	98/99
Llandudno North Shore	P	P	P	P	F	P	P	P	P	P	P	P	P	98/99
Colwyn Bay	P	P	P	P	P	P	P	F	P	P	P	P	P	98/99
Sandy Cove	F	F	F	F	F	F	F	P	P	P	P	P	P	94 and 2000
Rhyl	F	F	F	F	F	F	F	F	P	F	P	P	P	94 and 2000
Prestatyn	F	P	P	P	F	P	P	P	F	P	P	P	P	2000
* West Kirby						F	F	F	P	F	F	P	P	98
Total No. Waters in Wales	47	47	48	48	49	50	50	50	50	55	56	64	68	
Total No. Pass in Wales	23	28	37	40	35	45	39	42	38	49	52	60	64	
% Pass in Wales	49	60	77	83	70	88	76	82	76	89	91	94	94	
Total No. Waters in Wales and West Kirby	47	47	48	48	50	51	51	51	51	56	57	65	69	
Total No. Pass in Wales and West Kirby	23	28	37	40	35	45	39	42	39	49	52	61	65	
% Pass in Wales and West Kirby	49	60	77	83	70	88	76	82	76	88	91	94	94	

From 1992 all samples were subject to "confirmation" of analysis compared with previous years "presumptive" results

+1 sample of 20 taken has been discounted due to an exceptional weather waiver.

* West Kirby is situated in England but falls within the Welsh Region of the Environment Agency, for operational purposes, but is not reported in Environment Agency Wales statistics.

Table 3. Summary of Identified Bathing Waters sampled between 1990 and 1998.
Overall compliance with Guideline (G) standards for Faecal Streptococci, Faecal and Total coliforms.

Bathing Water	90	91	92	93	94	95	96	97	98
Jacksons Bay	F	F	F	F	F	F	F	F	F
Whitmore Bay	F	F	F	F	F	F	F	F	F
Cold Knap	F	F	F	F	F	F	F	F	F
Southerndown	F	F	F	F	F	F	F	F	F
Trecco Bay	F	F	F	F	F	P	P	P	F
Sandy Bay	F	F	F	F	F	P	F	F	F
Rest Bay	F	F	F	P	F	F	P	P	P
Aberafan	F	F	F	F	F	F	F	F	F
Swansea Bay	F	F	F	F	F	F	F	F	F
Bracelet Bay	F	F	F	F	F	F	F	F	F
Limeslade Bay	F	F	F	F	F	F	F	F	F
Langland Bay	F	F	F	F	F	F	F	F	F
Caswell Bay	F	F	F	F	F	F	F	P	F
Oxwich Bay	F	P	P	P	P	P	P	P	P
Port Eynon Bay	P	P	P	P	P	P	P	P	P
Rhossili	P	P	P	P	P	P	P	P	P
Pembrey	P	P	P	P	F	P	P	F	F
Pendine	F	F	F	P	F	F	F	F	P
Amroth	F	F	P	F	F	P	F	F	P
Saundersfoot	F	F	F	F	F	F	F	F	P
Tenby North	F	P	P	F	F	P	P	P	P
Tenby South	F	F	F	F	F	F	F	P	P
Lydstep North								P	P
Manobier								P	P
Broad Haven South								P	P
Marloes								P	P
Broadhaven	F	F	P	F	F	P	P	F	F
Newgale	P	P	P	P	F	P	P	P	P
Caerfai								P	P
Whitesands	F	P	P	P	F	P	P	P	P
Newport North	F	F	P	F	F	F	F	F	F
Poppit Sands							F	F	F
Aberporth						P	F	F	F
Tresaith						F	F	P	F
Llangranog								F	F
New Quay Harbour									P
Traeth Gwyn New Quay	F	F	F	F	F	F	P	P	F
Aberystwyth South	F	F	F	F	F	F	P	P	F
Aberystwyth North	F	F	F	F	F	F	P	F	F
Clarach South									F
Borth	F*	F	P	F	P	F	F	F	F
Aberdyfi	F*	F	F	F	F	F	F	F	F
Tywyn	F*	F	F	F	F	F	P	F	F
Fairbourne	F*	F	F	F	P	F	P	P	F
Barmouth	F*	F	F	F	P	P	P	P	P

Bathing Water	90	91	92	93	94	95	96	97	98
Talybont						P	P	P	P
Dyffryn/Llanendwyn						P	P	P	F
Llandanwg	F*	F	F	F	F	F	F	P	F
Harlech	F*	F	F	P	F	F	F	P	F
Morfa Bychan	F*	F	F	F	F	F	P	P	F
Criccieth	F*	F	F	F	F	F	F	F	F
Pwllheli	P*	P	F	P	P	P	P	P	P
Abersoch	F*	F	F	F	F	P	F	P	F
Morfa Dinlle	F*	P	P	P	P	P	P	P	P
Llanddwyn								P	P
Rhosneigr	P*	P	P	P	P	P	P	P	P
Trearddur Bay	F*	F	F	F	P	P	F	P	P
Porth Dafarch									P
Cemaes Bay									F
Benllech	F*	F	F	F	F	F	F	F	F
Llanddona								P	F
Penmaenmawr						F	F	F	F
Llandudno West Shore	F*	F	F	F	F	F	F	F	F
Llandudno North Shore	F*	F	F	F	F	P	F	F	F
Colwyn Bay	F*	F	F	F	F	F	F	F	F
Sandy Cove	F*	F	F	F	F	F	P	F	F
Rhyl	F*	F	F	F	F	F	F	F	F
Prestatyn	F*	F	F	F	F	F	F	F	F
West Kirby		F	F	F	F	F	F	F	P
Total No. Waters in Wales	50	50	50	50	50	55	56	64	68
Total No. pass in Wales	6	9	13	11	10	21	23	31	25
% Pass in Wales	12	18	26	22	20	38	41	48	37
Total No. in Wales & West Kirby	50	51	51	51	51	56	57	65	69
Total No. pass in Wales & West Kirby	6	9	13	11	10	21	23	31	26
% Pass in Wales & West Kirby	12	18	26	22	30	38	40	48	38

From 1992 all samples were subject to "confirmation" of analysis compared with previous years "presumptive" results

West Kirby is situated in England but falls within the Welsh Region of the Environment Agency, for operational purposes, but is not reported in Environment Agency Wales statistics.

+1 sample of 20 taken has been discounted due to an exceptional weather waiver. This sample did not affect compliance with the "G" standard

* Compliance against "G" value for total and faecal coliforms only, streptococci results deleted due to AQC protocol problems.

* Please see amended version of Table 4, enclosed.

Table 4.

Compliance of Non-Identified Bathing Waters with "I" and "G" Values in 1998
(G=Guideline and Imperative pass; I=Imperative pass; F= Imperative fail)

	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
1	Penarth Yacht Club	20	1	19	I	20	1	20	I	20	18	F	I
2	Bendricks Beach	20	0	9	I	20	0	13	I	20	3	F	I
3	Watchouse Bay	20	0	11	I	20	0	16	I	20	6	F	I
4	Fontygary Bay	20	0	3	G	20	0	14	I	20	2	G	I
5	Limpert Bay	20	0	1	G	20	1	4	G	20	2	G	G
6	Llantwit Major Beach	20	0	9	I	20	0	12	I	20	5	F	I
7	Newton Bay	20	0	9	I	20	0	12	I	20	5	F	I
8	Aberafan East	21	2	8	F	21	4	15	F	21	5	F	F
9	Jersey Marine East	20	0	10	I	20	0	18	I	20	8	F	I
10	Jersey Marine Central	20	1	10	I	20	2	16	F	20	7	F	I
11	Jersey Marine West	22	0	10	I	22	1	16	I	21	6	F	I
12	Swansea Bay County Hall	21	1	15	I	21	2	17	F	21	10	F	F
13	Swansea Bay Sketty Lane	21	5	16	F	21	8	18	F	21	17	F	F
14	Swansea Bay Black Pill	21	1	16	I	21	4	17	I	21	13	F	F
15	Mumbles Knap Rock	21	1	14	I	21	1	16	I	21	8	F	I
16	Mumbles Head Pier	21	0	18	I	21	0	19	I	21	12	F	I

	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
17	Brandy Cove	21	0	3	G	20	0	8	I	21	2	G	I
18	Pwlldu	21	0	4	G	21	0	6	I	21	3	F	I
19	Three Cliffs Bay	20	0	5	I	20	2	7	F	20	5	IF	F
20	Broughton Beach	21	1	4	G	20	2	6	F	19	3	F	F
21	Llanelli Beach	21	0	7	I	21	0	12	I	21	1	G	I
22	Burry Port Beach	22	0	4	G	22	0	2	G	22	3	F	I
23	St Ishmael	20	0	11	I	20	1	11	I	20	2	G	I
24	Llanstephen Beach	20	1	10	I	20	2	11	F	20	4	F	F
25	Ferryside Beach	20	4	16	F	20	2	15	F	20	8	F	F
26	Morfa Bychan (Pendine)	20	1	4	G	20	0	7	I	20	4	F	I
27	Wisemans Bridge	24	2	5	F	24	3	13	F	24	6	F	F
28	Coppett Hall Beach	21	0	1	G	21	0	6	I	21	3	F	I
29	Monkstone Beach	19	0	0	G	20	0	2	G	19	1	G	G
30	Tenby St. Catherines	20	0	1	G	20	0	3	G	20	4	F	I
31	Priory Bay, Caldy Island	21	0	1	G	21	0	4	G	20	2	G	G
32	Freshwater East	20	0	0	G	20	0	3	G	20	3	I	I
33	Barafundle	20	0	0	G	20	0	0	G	20	1	G	G
34	Freshwater West	20	0	0	G	20	0	1	G	20	1	G	G

	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
35	West Angle	20	0	2	G	20	0	6	I	20	4	I	I
36	Gelliswick	20	0	6	I	19	0	7	I	19	3	I	I
37	Sandy Haven	20	0	2	G	19	0	3	G	19	2	I	I
38	Dale	20	0	1	G	19	0	7	I	19	1	G	I
39	Watwick	20	0	1	G	19	0	1	G	19	0	G	G
40	Westdale	20	0	0	G	19	0	0	G	19	0	G	G
41	Martins Haven	20	0	0	G	19	0	0	G	19	0	G	G
42	St. Brides Haven	20	0	4	G	19	0	4	I	19	2	I	I
43	Little Haven	20	0	4	G	20	0	9	I	20	7	I	I
44	Nolton Haven	20	0	5	I	20	0	6	I	20	5	I	I
45	Abereiddy	20	0	0	G	20	0	1	G	20	1	G	G
46	Traethllyn	20	0	0	G	20	0	0	G	20	0	G	G
47	Abermawr	20	0	2	G	20	0	5	I	20	1	G	I
48	Goodwick Harbour	20	0	1	G	20	0	3	G	20	0	G	G
49	Goodwick Beach	20	0	2	G	20	0	5	I	20	3	I	I
50	Pwll Gwaelod	20	2	9	I	20	2	15	I	20	5	I	I
51	Cwm yr Eglwys	20	0	5	I	20	0	7	I	20	7	I	I
52	Newport Sands South	20	0	4	G	20	0	9	I	20	4	I	I

	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
53	Patch	20	3	18	F	20	6	17	F	20	10	F	F
54	Mwnt at Aberporth	20	0	1	G	20	0	3	G	20	3	I	I
55	Aberporth E	21	0	5	I	21	0	6	I	21	6	I	I
56	Penbryn	20	0	3	G	20	1	4	G	20	3	I	I
57	Cil Borth	20	0	4	G	20	0	7	I	20	5	I	I
58	Cwmtudu	20	0	6	I	20	0	11	I	20	5	I	I
59	Newquay N	20	1	3	G	20	1	4	G	20	4	I	I
60	Llanina	20	2	8	I	20	3	12	F	20	5	F	F
61	Little Quay (Cei Bach)	20	0	4	G	20	1	5	I	20	3	I	I
62	Gillach yr Halen	21	1	5	I	22	0	10	I	21	6	I	I
63	Aberaeron S	21	0	1	G	22	0	3	G	21	3	I	I
64	Aberaeron N 4th Groyne	20	0	5	I	22	1	9	I	20	4	I	I
65	Aberaeron N of outfall	21	1	5	I	22	1	13	I	21	5	I	I
66	Aberarth	21	0	4	G	22	0	9	I	21	8	I	I
67	Llanon	20	1	7	I	20	0	9	I	20	8	I	I
68	Llansantffraid	20	0	3	G	20	0	4	G	20	2	G	G
69	Llanrhystud S	20	0	1	G	21	0	3	G	20	4	I	I
70	Ynyslas	19	0	1	G	20	0	2	G	19	2	I	I

	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
71	Ynyslas Estuary	19	1	9	F	20	1	12	I	19	3	I	F
72	Garreg Wen	19	5	16	F	19	7	18	F	19	12	F	F
73	Criccieth E	19	0	2	G	19	1	6	F	19	2	F	F
74	Morfa Abererch	19	1	2	F	19	1	5	F	19	2	I	F
75	Llanbedrog	20	0	3	G	20	0	7	I	20	5	I	I
76	Porth Neigwl	20	0	0	G	20	0	0	G	20	0	G	G
77	Aberdaron	20	0	2	G	20	0	3	G	20	0	G	G
78	Porth Nefyn	20	0	3	G	20	0	5	I	20	4	I	I
79	Traeth Mawr, Aberffraw	20	0	4	G	20	0	10	I	20	3	I	I
80	Porth Treicastell	20	0	3	G	20	0	7	I	20	0	G	I
81	Porth Nobla	20	0	0	G	20	0	0	G	20	0	G	G
82	Porth Tyn Tywyn Llanfaelog	20	0	0	G	20	0	0	G	20	0	G	G
83	Traeth Crigyll, Rhosneigr	20	1	5	I	20	1	8	I	20	5	I	I
84	Silver Bay	20	0	0	G	20	0	1	G	20	0	G	G
85	Borth Wen	20	0	1	G	20	0	4	G	20	3	I	I
86	Newry Beach, Holyhead	20	0	3	G	20	0	5	I	20	4	I	I
87	Sandy Beach	20	1	1	G	20	0	1	G	20	1	G	G
88	Porth Trefadog	16	1	3	G	16	2	4	I	16	3	I	I

	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
89	Porth Trwyn	20	1	3	G	20	1	4	G	20	2	G	G
90	Church Bay	20	0	1	G	20	0	2	G	20	1	G	G
91	Cemlyn	20	0	1	G	20	0	1	G	20	0	G	G
92	Traeth Bach, Cemaes Bay	20	0	11	I	20	1	13	I	20	8	I	I
93	Porth Eilian	20	1	4	G	20	2	7	I	20	6	I	I
94	Traeth Llugwy	20	2	5	I	20	2	7	I	20	6	I	I
95	Moelfre	20	2	9	I	20	2	12	I	19	5	I	I
96	St. Davids, Benllech	20	0	0	G	20	0	2	G	20	4	I	I
97	Penmon	20	0	2	G	20	0	2	G	20	1	G	G
98	Beaumaris	20	1	3	G	20	1	10	I	20	5	I	I
99	Pentraeth	8	2	6	I	8	2	5	I	8	6	I	I
100	Port Dinorwic	21	0	9	I	21	0	13	I	21	6	I	I
101	Plas Menai	21	2	9	I	21	1	11	I	21	4	I	I
102	Llanfairfechan	20	2	6	I	20	3	11	F	20	6	F	F
103	Morfa Conwy	20	0	5	I	20	0	11	I	20	2	G	I
104	Deganwy N Shelter	20	0	7	I	20	1	15	I	20	7	I	I
105	Penrhyn Bay	20	4	18	F	20	6	18	F	20	10	F	F
106	Rhos Road, Colwyn Bay	20	0	4	G	20	0	14	I	20	3	I	I

	Bathing Water	Total Coliforms				Faecal Coliforms				Faecal Streps.			Overall Compliance G, I, F
		No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "I"	No. Fail "G"	Compliance	No. Samples	No. Fail "G"	Compliance	
107	Penrhos, Colwyn Bay	20	0	8	I	20	1	13	I	20	9	I	I
108	Colwyn Bay	20	0	7	I	20	0	11	I	20	5	I	I
109	Old Colwyn	20	0	3	G	20	0	9	I	20	4	I	I
110	Llanddulas	20	0	9	I	20	3	17	F	20	9	F	F
111	Abergele	20	0	9	I	20	1	11	I	20	5	I	I
112	Towyn	20	0	6	I	20	0	12	I	20	2	G	I
113	Splash Point	20	0	6	I	20	0	11	I	20	6	I	I
114	Ffrith Beach	20	0	6	I	20	0	12	I	20	5	I	I
115	Barkby Beach	20	0	2	G	20	0	11	I	20	4	I	I
116	Point of Ayr	20	1	4	G	20	0	9	I	20	2	G	I

Table 5 Summary of Non-Identified Bathing waters sampled between 1986 and 1998.
Overall Compliance with Imperative (I) standard for Faecal and Total Coliforms

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98
<i>Vale of Glamorgan County Borough Council</i>													
Penarth Yacht Club (19029)	F	F		F	F		F	F	F	F	F	F	P
St Marys Well Bay (19032)	F	F		F	F	F	F	P	F	F	P		
Bendricks Beach (19076)						F			F	F	F	P	P
Whitmore Bay (19033)						P							
Whitmore Bay (19035)						P							
Little Island (19056)						P	P	P					
Watchouse Bay (68603)	F	F		F	F	P	P	P	F	P	P	P	P
Fontygary Bay (19038)	F	P		P	P	F	P	P	P	P	P	P	P
Limpert Bay (19147)							P		P	P	P	P	P
Llantwit Major Beach (74050)	P	P		P	P	F	P	P	P	F	P	P	P
Ogmore by Sea (19042)	F	F											
Ogmore by Sea (19043)	F	F	F	F	F	F	P						
Ogmore by Sea (19044)	F	F											
<i>Bridgend County Borough Council</i>													
Newton Bay (19112)						F			F	P	P	P	P
<i>Neath and Port Talbot County Borough Council</i>													
Aberafan East (19050)			F	P	P	P	P		P	P	P	P	F
Aberafan West (19052)			P	P	F	P	P	P					
Margam Sands (19131)	P	F											
Margam Sands (19135)	P	P	F	P	F	P	P						
Margam Sands (74004)	P	F											
Jersey Marine East (74026)	F	F		P			P	P	F	P	P	P	P
Jersey Marine Central (39153)	F	F	F	P	P	P	P	P	F	P	P	P	F
Jersey Marine West (39097)	F	F		F			F	P	F	P	P	P	P
<i>Swansea County Council</i>													
Swansea Bay (39098)				P									
Swansea Bay County Hall (74060)								P	P	P	F	F	F
Swansea Bay (39100)				F									
Swansea Bay Sketty Lane (39154)									F	F	F	F	F
Swansea Bay Black Pill (39101)				P		P	P	P	F	P	F	F	F
Swansea Bay (39102)				F					P	P			
Mumbles Knab Rock (39103)				F		F	P	P	P	P	P	F	P
Mumbles Head Pier (39104)				F		F	P	F	P	F	P	F	P
Langland Bay E (39107)						P	P						
Brandy Cove (39170)						P					F	P	P
Pwlldu (39114)											P		P
Three Cliffs Bay West (39117)								P			P	P	F
Crawley Wood (74062)						P							
Fall Bay (74096)							P						

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98
Broughton Beach (74025)		P		P	P	P	P	P	F	P	P	P	F
Carmarthenshire County Council													
Llanelli Beach (39001)	F	F	F	F	F	F	F	F	F	F	F	P	P
Llanelli (39002)	F	F											
Burry Port Beach (39003)	F	P	F	P	P	P	P	P	F	F	F	P	P
St Ishmael (88503)	F								F	F	F	P	P
St Ishmael (88502)	F												
Llanstephen Beach (39008)	F						F		F	P	F	P	F
Ferryside Beach (39007)											F	F	F
Pendine West (39011)			P	P	P	P	P						
Morfa Bychan (88501)	F	P										F	P
Pembrokeshire County Council													
Amroth E (39012)			P	P	P	P	P						
Amroth W (39014)			P	P	P	P							
Wisemans Bridge (32797)								P	P	P	P	F	P
Coppett Hall Beach (32421)						F		P	F	F	P	P	P
Saundersfoot E (39016)			P	P	F	F	P						
Saundersfoot Slip (39018)			F	F									
Saundersfoot W (39019)			F	P	P	P	P						
Monkstone Beach (39574)												P	P
Tenby N Lifeboat (39021)			P	P	P	P	P						
Tenby S St.Catherines (39022)			P	P	P	P	P				P	P	P
Tenby S Atlantic Hotel (39023)			P	P	P	P	P						
Priory Bay, Caldey (39573)												P	P
Tenby S Opp Kiln Park (39025)			P	P	P	P	P						
Lydstep N Beach (39026)						P	P	P	P	P	P		
Skrinkle (39423)							P	P	P	P	P	P	
Manorbier Beach (39027)	P			F	F		P	P	P	P	P		
Manorbier (39028)	P			P	P	P	P						
Freshwater East (86210)	P												
Freshwater East (39029)	P			P	P		P		P	P	P	P	P
Freshwater East (39030)	P			P	P	P	P	P					
Barafundle (39136)							P	P	P	P	P	P	P
Broad Haven South (32422)						P	P	P	P	P	P		
Freshwater West (39031)								P	P	P	P	P	P
West Angle (39032)			P		P			P	P	P	P	P	P
Llanreath Bay (86106)			F		P	P							
Neyland Slip (85110)			F			F							
Milford Beach (39191)						P							
Gelliswick (39037)	P		F		P	F	P	P	P	P	P	F	P
Sandy Haven (39192)						P					P	P	P
Lindsway Bay (St Ishmaels) (39572)												P	
Dale (39040)		P	P		P	P	P	P	P	P	P	P	P
Watwick (39634)													P

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98
West Dale (39571)												P	P
Marloes (39139)						P							
Marloes (32788)								P	P	P	P		
Martins Haven (39041)									P		P	P	P
Musselwick (39140)						P							
St. Brides Haven (39042)						P				P	P	P	P
Little Haven (39043)		P			P		P		F	P	P	F	P
Druidston Haven (39141)							P						
Nolton Haven (39046)	F						P	P	F	P	P	F	P
Newgale S (39047)			P	P	P	P							
Newgale N (39049)			P	P	F	P							
Solva (39050)	F						P						
Caerfai (39142)		P				P	P	P	P	P	P		
Porthclais (32686)							F				P	F	
Abereddy (39053)		P				P	P	P	P	P	P	P	P
Traethllyn (39143)											P	P	P
Traethllyn (32789)								P					
Porthgain (32685)							P						
Trevine (39055)	F												
Abercastle (39056)							P				F	P	
Abermawr (39144)											P	P	
Goodwick (84004)	P	P											
Goodwick Harbour (39058)	P	F		P	P	P	P	P	P	P	P	P	P
Goodwick Beach (39059)	P	P		P	P	P	P	P	F	P	F	P	P
Fishguard (39060)	F	F					P						
Pwll Gwaelod (32790)								P	F	P	F	F	F
Cwm yr Eglwys (32791)								P	P	F	P	P	P
Newport Parrog Beach (39063)											F	F	
Newport Sands South (39064)			P	P	P	P	P	P	P	P	P	P	P
Poppit Sands West (39067)	F	F		P	P	P	P	P	P	P			
Poppit Sands East (39068)	P	F		P	P	P	P	P	P	P	P		
Ceibwr (39066)												P	
St Dogmaels Slipway (39341)												F	
Cardiganshire County Council													
Patch (32424)						F	F	F	F	F	P	F	F
Gwbert (83515)		F	F			F	F	P	F	F	F	P	
Gwbert (39070)		F											
Mwnt at Aberporth (32425)						P	P	P	P	P	P	P	P
Aberporth (39072)	F	F	F		F	F	F	P	F				
Aberporth E (83502)	P	P	F		F	F	P	P	F		P	P	P
Tresaith (39073)	F	F		P	F	P	P	P	P				
Penbryn (39147)				P		F	P	P	P	P	P	F	P
Llangranog (39075)	F	F	F	F	F	F	P	P	F	P	P		

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98
Cil Borth (32851)								P	P	P	P	P	P
Cwmtudu (32426)							P	P	P	P	P	P	P
Newquay N (39077)						P	F	P	P	P	P	P	P
Newquay S (39079)			P	P	P	P	P	P	P	P	P	P	
Llanina (39146)				P	F	P	P	P	P	F	P	P	F
Little Quay (Cei Bach) (39081)	P		P	P	P	P	P	P	F	F	F	P	P
Gilfach yr Halen (32427)						P	P	P	F	P	P	P	P
Aberaeron S (39082)	P				P	P	P	P	F	P	P	P	P
Aberaeron N 4 th Groyne (39083)					F	P	F	P	F	P	P	F	P
Aberaeron N (39084)	P									F	F		
Aberaeron N of outfall (N of Groynes) (39427)					F	F	P	P	F	P	F	P	P
Aberaeron Harbour (39426)							F						
Aberarth (32428)						P	P	P	P	P	P	P	P
Llanon (32429)						P	P	P	P	P	F	P	P
Llansantffraid (32430)						P	P	P	P	P	F	P	P
Llanrhystud S (39087)						P	P	P	P	P	P	P	P
Morfa Bychan at Slipway (32431)						P	P	P	P	P	P		
Tanybwllch (32432)						P	P	P	F	P	P		
Aberystwyth Slip (82103)			F	F		F	F	F	F				
Clarach Bay S (39095)	F	P	F	F	F	F	F	F	F	P			
Aberystwyth S (39090)			F	F	F	F	F						
Clarach Bay N (39096)	F					F	F	F	F	P	P	P	
Ynyslas (20022)					P	P	P		P	P	P	P	P
Ynyslas (20399)					F	P	P		P	F	P	F	F
Gwynedd County Borough Council													
Aberdyfi (20170)	F	F	F	P	F	F	F						
Aberdyfi (20172)	F	F	F	P	F	F	P						
Aberdyfi (20171)	F	F	F	P									
Llwyngwrl (20189)				F	F	F	F						
Barmouth (20181)				F	P	P	P						
Llanaber (20025)	P		P			P	P						
Talybont (20026)	P				P		P	P					
Llanendwyn (20027)		P			P	P		P					
Black Rock Sands (22540)			P		P	P	P	P					
Garreg Wen (23253)	P	F	F		P	F	F	F	F	F	F	F	F
Criccieth E (23141)							P		F	P	P	F	F
Criccieth W (22541)			F	F	F	F	F						
Afon Wen (22543)	F	F	F										
Pen y chain (22544)	P	F	F		P		P						
Morfa Abererch (22545)		P	P		P		P		P	P	P	P	P
Pwllheli (22546)			F		P	P	P						
Traeth Crugen (22548)		P	P		P		P						
Llanbedrog (22549)	F	F	F	P	F	F	P		P	P	P	P	P

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98
Abersoch (22550)			F	P	P	P	P						
Abersoch (23346)						P							
Abersoch (22586)							P						
Machroes (20335)						P							
Porth Ceiriad (20334)						P							
Porth Neigwl (23331)					P	P							
Porth Neigwl (25437)							P		P	P	P	P	P
Aberdaron (22553)	P	P	P	P	P	P	P		P	P	P	P	P
Porth Oer (22555)	F				P	P	P						
Porth Iago (22556)	P				P	P	P						
Porth Colman (22557)	P				P	P	P						
Porth Tywyn (22558)			P		P	P	P						
Porth Dinllaen (22559)	F	P	F	P	F	P	P	P					
Porth Nefyn (22560)	F	P	P	P	P	P	P		P	P	P	P	P
Trefor (22561)	P	P	P		P		P						
Aberdesach (22562)	P	P			P		P						
Pontllynfi (22563)			P			P							
Morfa Dinlle (22564)	P	P											
Dinas Dinlle (23244)	P	P	P		P	P	F						
Plas Menai (23290)				P	P	P	P		P	P	P	F	F
Port Dinorwic (23252)	F	F			F	F	F		P	P	F	P	P
Anglesey County Council													
Llanddwyn (Niwbwrch) (27537)	F		P		P			P	P	P	P		
Malltraeth (27556)						P							
Aberffraw (27538)	P		P	P			P				P	P	P
Porth Tre Castell (27539)	P												P
Porth Nobla, Llanfaelog (27540)	P										P	P	P
Porth Tyn Tywyn Llanfaelog (23476)													P
Rhosneigr (27536)	P	P	F	P									
Rhosneigr (27534)	P	F	F	P	P	P	F						
Traeth Crigyll Rhosneigr (23477)													P
Traeth Crigyll (27557)						P	P						
Silver Bay, Rhoscolyn (27541)					P						P	P	P
Borth Wen - Rhoscolyn (27542)					F			P	P	P	P	P	P
Porth y Garan (27787)	F				P								
Porth Gwr Mawr (27544)						F	F	F					
Porth Dafarch - Trearddur (27546)	P							P	P	P	P	P	
Holyhead Newry (27559)						P	P						P
Penrhos (27817)	P				F	P							
Porth Tywyn Mawr, Sandy Beach (27547)					P					P	P	P	P
Porth Trefadog (23479)													F
Porth Trwyn (23480)													P

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98
Church Bay (27548)	P		P		P					P	P	P	P
Cemlyn (27531)													P
Cemaes (27529)	P	F		P	F	P		F			P	P	
Traeth Bach, Cemaes Bay (23481)													P
Bull Bay (27566)											F	P	
Porth Eilian, Amlwch (27549)							F				P	P	F
Traeth Llugwy (27528)	P		P	P	P						P	P	F
Moelfre (27561)							F				P	P	F
Traeth Bychan (27527)	P			P	F		P						
St. Davids, Benllech (23491)													P
Benllech (27827)			F	P	P	P	P						
Red Wharf Bay (27552)				F		F							
Llanddona (27562)	P			P	P	P		P	P	P	P		
Penmon (23483)													P
Beaumaris (27829)				F	F	F	F						
Beaumaris (27828)	P			F	P	P	F						
Beaumaris (27757)											P	P	P
Pentraeth (23482)													F
Menai Bridge Pier (27568)						F	P						
Aberconwy/Conwy County Borough Council													
Llanfairfechan Shore Rd (23245)	P	F	F	P	P	P	P	F	P	P	P	P	F
Penmaenmawr (22996)							P						
Penmaenmawr (22995)	F				P	P	P	P	P				
Penmaenmawr (23006)	P			P	P	P	P						
Penmaenmawr (23005)	P			F	F	P	F						
Morfa Conwy (23246)	F	F	F		F			P	P	F	P	P	P
Conwy Morfa (25036)	F												
Deganwy N Shelter (25034)					F	F	F	F	P	P	F	P	P
Llandudno W (25033)					F	F	F						
Llandudno N (25026)						F	P						
Llandudno N (25185)							P						
Penrhyn Bay (25045)	F	F	F		F	F	F	F	F	F	F	F	F
Rhos Road, Colwyn Bay (25042)			P		F	P	P	P	P	P	P	P	P
Penrhos, Colwyn Bay (25041)			F		P	F	P	F	P	P	P	P	P
Colwyn Bay (25020)									P	P	P	P	P
Old Colwyn (23492)													P
Llanddulas (3597)			F	P	P	P	F		P	P	P	F	F
Abergele (3600)							P						
Abergele (3601)	P	P	F	P	F	P	P		P	P	P	P	P
Towyn (25436)									P	P	P	P	P
Kinmel Bay (3605)			F	F		F	F						
Denbighshire County Council													
Rhyl Splash Point (3610)			F	P	F	F	F						P

Bathing Water	86	87	88	89	90	91	92	93	94	95	96	97	98
Ffrith Beach, Prestatyn (3611)	P	F	F	P	F	F				P	P	P	P
Prestatyn Barkby (3614)			F		P	F	P						P
Gronant (25498)										P	P		
Flintshire County Council													
Point of Ayr (3617)		P		P	P	P	P		P	P	P	P	P
Wirral County Council													
Thurstaston Station Rd (3649)						F	F						
Caldycroft Drive (3648)						F	F						
W. Kirby (3646)						P	P						
Total Number Sampled in Wales	89	63	73	83	111	142	149	87	102	102	121	113	116
Number not Exceeding standards in Wales	47	27	31	59	70	96	112	73	65	82	95	88	92
% Not Exceeding standards in Wales	53	43	42	71	63	69	76	84	64	80	78	78	79
Total Number Sampled in Wales and Wirral	89	63	73	83	111	143	150	87	102	102	121	113	116
Number not Exceeding standards in Wales and Wirral	47	27	31	59	70	97	113	73	65	82	95	88	92
% Not Exceeding standards in Wales and Wirral	53	43	42	71	63	68	75	84	64	80	78	78	79

P = ≤ 5% of samples with > 2000/100ml for Faecal Coliforms and ≤ 5% of samples > 10000/100ml Total Coliforms

F = > 5% of samples with > 2000/100ml for Faecal Coliforms and > 5% of samples > 10000/100ml Total Coliforms

Table 6. Summary of Non-Identified Bathing waters sampled between 1990 and 1998. Overall compliance with Guideline (G) standards for Faecal Coliforms, Total Coliforms and Faecal Streptococci.

Bathing Water	90	91	92	93	94	95	96	97	98
Vale of Glamorgan County Borough Council									
Penarth Yacht Club (19029)	F		F	F	F	F	F	F	F
St Marys Well Bay (19032)	F	F	F	F	F	F	F		
Bendricks Beach (19076)		F			F	F	F	F	F
Whitmore Bay (19033)		F							
Whitmore Bay (19035)		F							
Little Island (19056)		F	F	F					
Watchouse Bay (68603)	F	F	F	F	F	F	F	F	F
Fontygary Bay (19038)	F	F	F	F	F	F	F	F	F
Limpert Bay (19147)			F		F	F	F	F	P
Llantwit Major Beach (74050)	F	F	F	F	F	F	F	F	F
Ogmore by Sea (19043)	F	F	F						
Bridgend County Borough Council									
Newton Bay (19112)		F			F	F	F	F	F
Neath and Port Talbot County Borough Council									
Aberafan East (19050)	F	F	F		F	F	F	F	F
Aberafan West (19052)	F	F	F	F					
Margam Sands (19135)	F	F							
Jersey Marine East (74026)			F	F	F	F	F	F	F
Jersey Marine Central (39153)	F	F	F	F	F	F	F	F	F
Jersey Marine West (39097)			F	F	F	F	F	F	F
Swansea County Council									
Swansea Bay County Hall (74060)				F	F	F	F	F	F
Swansea Bay Sketty Lane (39154)					F	F	F	F	F
Swansea Bay Black Pill (39101)		F	F	F	F	F	F	F	F
Swansea Bay (39102)					F	F			
Mumbles Knab Rock (39103)		F	F	F	F	F	F	F	F
Mumbles Head Pier (39104)		F	F	F	F	F	F	F	F
Langland Bay E (39107)		F	F						
Brandy Cove (39170)		F					F	F	F
Pwlldu (39114)							F		F
Three Cliffs Bay West (39117)				P			F	F	F
Crawley Wood (74062)		P							
Fall Bay (74096)			P						
Broughton Beach (74025)	P	F	P	F	F	F	F	F	F
Carmarthenshire County Council									
Llanelli Beach (39001)	F	F	F	F	F	F	F	F	F
Burry Port Beach (39003)	F	F	F	F	F	F	F	F	F
St Ishmael (88503)					F	F	F	F	F

Bathing Water	90	91	92	93	94	95	96	97	98
Llanstephen Beach (39008)			F		F	F	F	F	F
Ferryside Beach (39007)							F	F	F
Pendine West (39011)	F	F	F						
Morfa Bychan (88501)								F	F
Pembrokeshire County Council									
Amroth E (39012)	P	F	F						
Amroth W (39014)	F	F							
Wisemans Bridge (32797)				F	F	P	F		F
Coppett Hall Beach (32421)		F			F	F	F		F
Saundersfoot E (39016)	F	F	F						
Saundersfoot W (39019)	F	F	F						
Monkstone Beach (39574)								P	P
Tenby N Lifeboat (39021)	P	P	F						
Tenby S St.Catherines (39022)	F	F	F					P	F
Tenby S Atlantic Hotel (39023)	F	F	F						
Priory Bay, Caldey (39573)								P	P
Tenby S Opp Kiln Park (39025)	F	F	P						
Lydstep N Beach (39026)		F	P	P	F	P	P		
Skrinkle (39423)			P	P	P	P	P	P	
Manorbier Beach (39027)	F	F	P	P	F	P	F		
Manorbier (39028)	F		P						
Freshwater East (39029)	P	F	F	P	P	P	F	P	F
Freshwater East (39030)	F		F						
Barafundle (39136)			P	P	P	P	P	P	P
Broad Haven South (32422)		P	P	F	P	P	P		
Freshwater West (39031)				F	P	F	P	P	P
West Angle (39032)	P			F	F	F	P	F	F
Llanreath Bay (86106)	F	F							
Neyland Slip (85110)		F							
Milford Beach (39191)		F							
Gelliswick (39037)	F	F	F	F	F	F	F	F	F
Sandy Haven (39192)		P					P	F	F
Lindsway Bay (St Ishmaels) (39572)								P	
Dale (39040)	F	F	F	F	P	F	F	F	F
Watwick (39634)									P
West Dale (39571)								P	P
Marloes (32788)		P		P	P	P	P		
Martins Haven (39041)					P		P	P	P
Musselwick (39140)		P							
St. Brides Haven (39042)		P				F	F	F	F
Little Haven (39043)	F		F		F	F	F	F	F
Druidston Haven (39141)			P						
Nolton Haven (39046)			F	F	F	F	F	F	F

Bathing Water	90	91	92	93	94	95	96	97	98
Newgale S (39047)	P	F							
Newgale N (39049)	F	F							
Solva (39050)			F						
Caerfai (39142)		P	P	F	P	P	P		
Porthclais (32686)			F				F	F	
Abereiddy (39053)		P	P	P	P	P	P	P	P
Traethllyn (39143)							P	P	P
Traethllyn (32789)				P					
Porthgain (32685)			F						
Abercastle (39056)			F				F	F	
Abermawr (39144)							P	P	F
Goodwick Harbour (39058)	F	P	P	F	F	F	F	P	P
Goodwick Beach (39059)	F	F	F	F	F	F	F	F	F
Fishguard (39060)			F						
Pwll Gwaelod (32790)				F	F	F	F	F	F
Cwm yr Eglwys (32791)				F	F	F	F	F	F
Newport Parrog Beach (39063)							F	F	
Newport Sands South (39064)	P	F	F	F	P	P	F	P	F
Poppit Sands West (39067)	P	P	F	F	P	P			
Poppit Sands East (39068)	P	F	F	F	F	P	F		
Ceibwr (39066)								F	

Cardiganshire County Council

Patch (32424)		F	F	F	F	F	F	F	F
Gwbirt (83515)		F	F	F	F	F	F	F	
Mwnt at Aberporth (32425)		P	P	P	P	P	P	F	F
Aberporth (39072)	F	F	F	F	F				
Aberporth E (83502)	F	F	F	F	F		F	F	F
Tresaith (39073)	F	F	F	F	F				
Penbryn (39147)		F	F	F	P	P	F	F	F
Llangranog (39075)	F	F	F	F	F	F	F		
Cil Borth (32851)				F	F	P	F	F	F
Cwmtudu (32426)			F	F	F	F	F	F	F
Newquay N (39077)		F	F	F	F	F	F	F	F
Newquay S (39079)	F	F	F	F	F	F	P	F	
Llanina (39146)	F	F	F	F	F	F	F	F	F
Little Quay (Cei Bach) (39081)	F	F	F	F	F	F	F	F	F
Gilfach yr Halen (32427)		F	F	F	F	F	F	F	F
Aberaeron S (39082)	P	F	F	F	F	P	F	F	F
Aberaeron N 4 th Groyne (39083)	F	F	F	F	F	F	F	F	F
Aberaeron N (39084)						F	F		
Aberaeron N of outfall (N of Groynes) (39427)	F	F	F	F	F	F	F	F	F
Aberaeron Harbour (39426)			F						
Aberarth (32428)		F	F	P	F	P	F	F	F

Bathing Water	90	91	92	93	94	95	96	97	98
Llanon (32429)		F	F	F	F	F	F	F	F
Llansantffraid (32430)		F	F	P	F	F	F	F	P
Llanrhystud S (39087)		P	P	F	P	P	F	P	F
Morfa Bychan at Slipway (32431)		F	F	F	F	P	P		
Tanybwllch (32432)		F	F	F	F	P	P		
Aberystwyth Slip (82103)		F	F	F	F				
Clarach Bay S (39095)	F	F	F	F	F	F			
Aberystwyth S (39090)	F	F	F						
Clarach Bay N (39096)		F	F	F	F	F	F	F	
Ynyslas (20022)		P	P		P	F	P	P	F
Ynyslas (20399)		F	F		F	F	F	F	F
Gwynedd County Borough Council									
Aberdyfi (20170)		F	F						
Aberdyfi (20172)		F	F						
Llwyngwrl (20189)		F	F						
Barmouth (20181)		F	F						
Llanaber (20025)		F	P						
Talybont (20026)			F	F					
Llanendwyn (20027)		P		F					
Black Rock Sands (22540)		F	F	F					
Garreg Wen (23253)		F	F	F	F	F	F	F	F
Criccieth E (23141)			F		F	P	F	F	F
Criccieth W (22541)		F	F						
Pen y chain (22544)			F						
Morfa Abererch (22545)			F		P	P	F	P	F
Pwllheli (22546)		F	F						
Traeth Crugeu (22548)			F						
Llanbedrog (22549)		F	F		F	F	F	F	F
Abersoch (22550)		F	F						
Abersoch (23346)		F							
Abersoch (22586)			F						
Machroes (20335)		F							
Porth Ceiriad (20334)		P							
Porth Neigwl (25437)		P	P		P	P	P	P	P
Aberdaron (22553)		P	P		F	F	F	F	P
Porth Oer (22555)		P	P						
Porth Iago (22556)		P	P						
Porth Colman (22557)		F	F						
Porth Tywyn (22558)		P	P						
Porth Dinllaen (22559)		F	F	F					
Porth Nefyn (22560)		F	F		F	F	F	F	F
Trefor (22561)			F						
Aberdesach (22562)			F						

Bathing Water	90	91	92	93	94	95	96	97	98
Pontllynfi (22563)		F							
Dinas Dinlle (23244)		F	P						
Plas Menai (23290)		F	F		F	F	F	F	F
Port Dinorwic (23252)		F	F		F	F	F	F	F
Anglesey County Council									
Llanddwyn (Niwbwrch) (27537)				F	P	P	P		
Aberffraw (27538)			F				F	P	F
Porth Trecestell (27539)									F
Porth Nobla, Llanfaelog (27540)							F	P	P
Porth Tyn Tywyn Llanfaelog (23476)									P
Rhosneigr (27534)		F	F						
Traeth Crigyll Rhosneigr (23477)									F
Traeth Crigyll (27557)		F	F						
Silver Bay, Rhoscolyn (27541)							F	P	P
Borth Wen – Rhoscolyn (27542)					F	P	F	P	F
Porth Gwr Mawr (27544)		F	F	F					
Porth Dafarch – Trearddur (27546)				F	F	P	F	F	
Holyhead Newry (27559)		P	F						F
Penrhos (27817)		F							
Porth Tywyn Mawr, Sandy Beach (27547)						P	F	F	P
Porth Trefadog (23479)									F
Porth Trwyn (23480)									P
Church Bay (27548)						P	F	P	P
Cemlyn (27531)									P
Cemaes (27529)		F					F	F	
Traeth Bach, Cemaes Bay (23481)									F
Bull Bay (27566)							F	F	
Porth Eilian, Amlwch (27549)			F				F	F	F
Traeth Llugwy (27528)							F	F	F
Moelfre (27561)			F				F	F	F
Traeth Bychan (27527)			F						
St. Davids, Benllech (23491)									F
Benllech (27827)		F	F						
Red Wharf Bay (27552)		F							
Llanddona (27562)		F			F	P	P		
Penmon (23483)									P
Beaumaris (27829)		F	F						
Beaumaris (27828)		F	F						
Beaumaris (27757)							F	F	F
Pentraeth (23482)									F
Menai Bridge Pier (27568)		F	F						
Aberconwy and Conwy County Borough Council									
Llanfairfechan Shore Rd (23245)		F	F	F	F	F	F	F	F

Bathing Water	90	91	92	93	94	95	96	97	98
Penmaenmawr (22996)			F						
Penmaenmawr (22995)		F	F	F	F				
Penmaenmawr (23006)		F	F						
Penmaenmawr (23005)		F	F						
Morfa Conwy (23246)				F	F	F	F	F	F
Deganwy N Shelter (25034)		F	F	F	F	F	F	F	F
Llandudno W (25033)		F	F						
Llandudno N (25026)		F	F						
Llandudno N (25185)			F						
Penrhyn Bay (25045)		F	F	F	F	F	F	F	F
Rhos Road, Colwyn Bay (25042)		F	F	F	F	F	F	F	F
Penrhos, Colwyn Bay (25041)		F	F	F	F	F	F	F	F
Colwyn Bay (25020)					F	F	F	F	F
Old Colwyn (23492)									F
Llanddulas (3597)		F	F		F	F	F	F	F
Abergele (3600)			F						
Abergele (3601)		F	F		F	F	F	F	F
Towyn (25436)					P	F	F	F	F
Kinnel Bay (3605)		F	F						
Denbighshire County Council									
Rhyl Splash Point (3610)		F	F						F
Ffrith Beach, Prestatyn (3611)		F				F	F	F	F
Prestatyn Barkby (3614)		F	F						F
Gronant (25498)						F	F		
Flintshire County Council									
Point of Ayr (3617)		F	F		F	F	F	F	F
Wirral County Council									
Thurstaston Station Rd (3649)		F	F						
Caldycroft Drive (3648)		F	F						
W. Kirby (3646)		F	F						
Total Number Sampled in Wales	50*	139	145	83	102	102	120	109	116
Number not Exceeding "G" standards in Wales	10	23	27	12	19	30	21	24	22
% Not Exceeding standards in Wales	20	17	19	14	19	29	18	22	19
Total Number Sampled in Wales and Wirral	50*	142	148	83	102	102	120	109	116
Number not Exceeding "G" standards in Wales and Wirral	10	23	27	12	19	30	21	24	22
% Not Exceeding standards in Wales and Wirral	20	16	18	14	19	29	18	22	19

Appendix 1

Criteria for Assessing Compliance with EC Bathing Waters Directive Standards

1. Article 3 of the EC Directive on the quality of bathing waters (76/160/EEC) requires member states to set bathing water quality standards no less stringent than those specified as "Imperative" (I) values in the Annex to the Directive. Article 3 also requires member states to endeavour to observe "Guideline" (G) values as guidelines, whether or not there is a corresponding "I" value.
2. Article 5 sets out the detailed requirements for compliance.
For "I" value determinands:-
 - a) 95% of the samples must comply with the "I" value
 - b) The 5% not complying with the "I" value must not allow consecutive samples taken at statistically valid intervals to exceed the "I" value, ie. "I" value failures must be of short duration.

For "G" value determinands:-

- a) 90% of the samples must conform with the "G" value (80% in the case of total coliform and faecal coliform parameters).
- b) The 10 (or 20%) not complying with the "G" value must not allow consecutive samples taken at statistically valid intervals to not exceed the "G" value, ie. "G" value failures should be of short duration.

Quality Standards for Bathing Waters used in this Report

<u>Parameter</u>	<u>Imperative Standard</u>	<u>Guide Standard</u>
<u>Microbiological</u>		
Faecal coliforms	2000/100 ml	100/100 ml
Total coliforms	10000/100 ml	500/100 ml
Faecal streptococci		100/100 ml
Salmonella	0 / litre	
Enteroviruses	0 PFU/10 litres	
<u>Parameter</u>		
<u>Physico-chemical</u>		
pH	6 - 9	-
Colour	No abnormal change in colour	-
Mineral Oils	No film visible on water surface and no odour	0.3 mg / litre
Surface Active Substances	No lasting foam	0.3 mg / litre
Phenols	No specific odour (0.05 mg / litre)	0.005 mg / litre

Transparency *

Extinction depth of
1m for Secchi disc
- equivalent to
6.665 ftu (turbidity)

Extinction depth
of 2m - equivalent
turbidity value
not yet calculated

Tarry Residues and
Persistent Floating
Solids

Must be absent

* Environment Agency Wales has been granted a derogation for transparency at all its bathing waters so is not required to comply with these standards.

Appendix 2 Identified Bathing Water Sample Point Details

Bathing water	Sample Point NGR	Sample Point Number	DETR/WO Number
Jacksons Bay, Barry	ST1220066570	19055	36100
Whitmore Bay Central, Barry	ST1145066250	19034	36200
Cold Knap, Barry	ST0965066400	19037	36300
Southerndown (Centre)	SS8840072900	19100	36400
Trecco Bay Central, Porthcawl	SS8310076300	19114	36500
Sandy Bay Central, Porthcawl	SS8240076500	19117	36600
Rest Bay, Porthcawl	SS8000077900	19122	36700
Aberafan Slip	SS7390089600	19051	36800
Swansea Bay at Slip	SS 6440092100	74006	36900
Bracelet Bay, Mumbles Head	SS6300087100	39105	37000
Limeslade Bay	SS6250087000	39106	37100
Langland Bay West	SS6060087100	39109	37200
Caswell Bay Central	SS5910087400	39111	37300
Oxwich Bay West End	SS5070086200	39123	37400
Port Eynon Bay West	SS4720084800	39127	37500
Rhossili at Hillend	SS4140090000	74010	37600
Pembrey, Cefn Sidan	SS4000099800	39005	37700
Pendine East	SN2380007400	39010	37800
Amroth Central	SN1670006800	39013	37900
Saundersfoot Beach Slip	SN1410004700	39017	38000
Tenby North, Gosker Rock	SN1345000800	39020	38100
Tenby South, Old Outfall	SS1325099850	39024	38200
Lydstep N Beach	SS0920098300	39570	38220
Manorbier Beach	SS0580097400	39027	38230
Broad Haven South	SR9790093900	32422	38240
Marloes	SM7850007500	32788	38280
Broadhaven Central	SM8610013800	84231	38300
Newgale Central	SM8460021700	39048	38400
Caerfai	SM7600024400	39142	38460
Whitesands Central	SM7300027000	84232	38500
Newport Sands North	SN0530040700	39065	38600
Poppit Sands West	SN1520048900	39067	38630
Aberporth Beach West	SN2580051700	39072	38660
Tresaith	SN2780051700	39073	38670
Llangranog	SN3100054300	39075	38680
New Quay Harbour	SN3910059900	39079	38690
Treath Gwyn, New Quay	SN3980059700	39080	38700

Bathing water	Sample Point NGR	Sample Point Number	DETR/WO Number
Aberystwyth South	SN5790081400	39091	38800
Aberystwyth North	SN5830082200	39093	38900
Clarach South	SN5860083700	39095	38920
Borth, Opposite Hotel	SN6060090100	20023	39000
Aberdyfi	SN6072095800	20171	39050
Tywyn Main Beach Access	SH5767000320	20019	39100
Fairbourne	SM9240013600	20402	39200
Barmouth Coastguard	SH6084015900	20014	39300
Talybont	SH5775021100	20026	39350
Duffryn / Llanendwyn	SH5671022580	20027	39360
Llandanwg Central	SH5669028180	20028	39400
Harlech North	SH5676031480	22596	39500
Morfa Bychan, Black Rock Sands (Old Site)	SH5421035950 SH5421035950	22539 22539	39600
Criccieth East	SH5033338075	23142	39700
Pwllheli	SH3710034070	22589	39800
Abersoch South	SH3168027720	22552	39900
Morfa Dinlle	SH4349056690	22564	39970
Llanddwyn (Niwbwrch)	SH4034063050	27537	39980
Rhosneigr	SH3237072120	27536	39990
Trearddur Bay	SH2556078910	27532	40000
Porth Dafarch	SH2330079900	27546	40010
Cemaes Bay	SH3732093620	27529	40050
Benllech	SH5268082560	27551	40100
Llanddona	SH5660081210	27562	40140
Penmaenmawr	SH7180076930	22995	40180
Llandudno West Shore	SH7655081650	25032	40200
Llandudno North Shore Llandudno North (Old Site)	SH7832082490 SH7918082270	23486 25046	40300
Colwyn Bay, Op. Railway Underpass	SH8584079170	25049	40400
Sandy Cove, Kinnel Bay	SH9780080600	3604	40500
Rhyl, High Street	SJ0020082600	3608	40600
Prestatyn Central, West Car Park	SJ0585084200	3612	40700
West Kirby, Dee Lane	SJ2100086800	3646	40750

Appendix 3**Non-Identified Bathing Water Sample Point Details.**

Bathing Water	Sample Point NGR	Sample Point Number
Penarth Yacht Club	ST1895070850	19029
Bendricks Beach	ST1360067000	19076
Watchouse Bay	ST1060066200	68603
Fontygary Bay	ST0525065750	19038
Limpert Bay	ST0190066200	19147
Llantwit Major Beach	SS9550067300	74050
Newton Bay	SS8380076940	19112
Aberafan East	SS7445088950	19050
Jersey Marine East	SS7090091600	74026
Jersey Marine Central	SS7040092500	39153
Jersey Marine West	SS6920092000	39097
Swansea Bay County Hall	SS6530092000	74060
Swansea Bay Sketty Lane	SS6290091400	39154
Swansea Bay Black Pill	SS6320089800	39101
Mumbles Knab Rock	SS6250087800	39103
Mumbles Head Pier	SS6320087400	39104
Brandy Cove	SS5850087400	39170
Pwlldu	SS5750087000	39114
Three Cliffs Bay West	SS5330087600	39117
Broughton Beach	SS4190093000	74025
Llanelli Beach	SS4960099500	39001
Burry Port Beach	SN4460000200	39003
St Ishmael	SN3650007500	88503
Llanstephen Beach	SS3550010700	39008
Ferryside Beach	SN3050010400	39007
Morfa Bychan (Pendine)	SN2240007400	88501
Wisemans Bridge	SN1440006000	32797
Coppett Hall Beach	SN1430005300	32421
Monkstone Beach (nr Tenby)	SN1480003100	39574
St. Catherines	SN1382000230	39022
Priory Bay, Caldey	SS1380097000	39573
Freshwater East	SS0220097900	39029
Barafundle	SR9920095000	39136
Freshwater West	SR8820099700	39031
West Angle	SM8520003300	39032
Gelliswick	SM8870005600	39037
Sandy Haven	SM8570007300	39192
Dale	SM8130005700	39040
Watwick	SM8170004100	39634
Westdale	SM7980005800	39571
Martins Haven	SM7610009200	39041
St. Brides Haven	SM8020011100	39042
Little Haven	SM8570012800	39043

Bathing Water	Sample Point NGR	Sample Point Number
Nolton Haven	SM8580018800	39046
Abereiddy	SM7970031300	39053
Traethllyn	SM8010031900	39143
Abermawr	SM8810034600	39144
Goodwick Harbour	SM9480038200	39058
Goodwick Beach	SM9480037800	39059
Pwll Gwaelod	SN0050039900	32790
Cwm yr Eglwys	SN0150040100	32791
Newport Sands South	SN0540040500	39064
Patch	SN1627048520	32424
Mwnt at Aberporth	SN1930051900	32425
Aberporth E	SN2590051700	83502
Penbryn	SN2910052400	39147
Cil Borth	SN3110054400	32851
Cwmtudu	SN3555057650	32426
Newquay N	SN3900060200	39077
Llanina	SN4030059800	39146
Little Quay (Cei Bach)	SN4100059800	39081
Gilfach yr Halen	SN4354061360	32427
Aberaeron S	SN4530062800	39082
Aberaeron N 4th Groyne	SN4550063400	39083
Aberaeron N of outfall (N of Groynes)	SN4620063500	39427
Aberarth	SN4765063870	32428
Llanon	SN5067066750	32429
Llansantffraid	SN5086067180	32430
Llanrhystud S	SN5230069100	39087
Ynyslas	SN6030092800	20022
Ynyslas Estuary	SN6120094300	20399
Garreg Wen	SH5607037060	23253
Criccieth E	SH5017537967	23141
Morfa Abererch	SH4031035790	22545
Llanbedrog	SH3339031440	22549
Porth Neigwl	SH2808026310	25437
Aberdaron	SH1733026260	22553
Porth Nefyn	SH3017040840	22560
Traeth Mawr	SH3524067640	27538
Porth Trecastell	SH3321070660	27539
Porth Nobla	SH3292071160	27540
Porth Tyn Tywyn Llanfaelog	SH3274071580	23476
Traeth Crigyll, Rhosneigr	SH3143073240	23477
Silver Bay	SH2925075160	27541
Borth Wen	SH2732075000	27542
Newry Beach, Holyhead	SH2448083280	27814
Porth Tywyn Mawr, Sandy Beach, Llanfwrog	SH2867085160	27547
Porth Trefadog	SH2920086200	23479

Bathing Water	Sample Point NGR	Sample Point Number
Porth Trwyn	SH2950087800	23480
Church Bay	SH2997089400	27548
Cemlyn	SH3356093160	27531
Traeth Bach, Cemaes Bay	SH3710093600	23481
Porth Eilian, Amlwch	SH4768092960	27549
Traeth Llugwy	SH4990087520	27528
Moelfre	SH5133086250	27561
St. Davids, Benllech	SH5307082040	23491
Penmon	SH6405081370	23483
Beaumaris	SH6095076000	27757
Pentraeth	SH5345079910	23482
Port Dinorwic	SH5217067370	23252
Plas Menai	SH5024066120	23290
Llanfairfechan Shore Rd	SH6802075810	23245
Morfa Conwy	SH7574078840	23246
Deganwy N Shelter	SH7750079450	25034
Penrhyn Bay	SH8312081630	25045
Rhos Road, Colwyn Bay	SH8450080490	25042
Penrhos, Colwyn Bay	SH8493079610	25041
Colwyn Bay	SH8527079370	25020
Old Colwyn	SH8662078750	23492
Llanddulas	SH9070078800	3597
Abergele	SH9445079000	3601
Towyn	SH9650079600	25436
Splash Point (Rhyl)	SJ0190082700	3610
Ffrith Beach, Prestatyn	SJ0460083600	3611
Barkby Beach (Prestatyn)	SJ0653084500	3614
Point of Ayr	SJ1210085900	3617

Appendix 4. Salmonella and Enterovirus Sampling 1998

It was considered desirable that there should be a trigger mechanism to initiate Enterovirus and Salmonella monitoring.

The following criteria triggered Enterovirus and Salmonella monitoring:-

1. Non compliance with I value in 1997 for Total and Faecal Coliforms
2. Positive Enterovirus result in 1997 triggered Enterovirus sampling in 1998
3. Positive Salmonella result in 1997 triggered Salmonella sampling in 1998
4. Non-compliance with Faecal Coliform or Total Coliform I value standards within the bathing season (i.e. two or more samples out of the planned twenty exceeding the I-value numerical limit during the monitoring period)
5. Significant increase in the amount of sewage derived litter observed in a 10 metre band either side of the Bathing Water sample transect. A scoring system based on the Garber assessment for sewage debris was used, which then triggered sampling. Details are given in Appendix 5.

Appendix 5 "GARBER" ASSESSMENT

The "Garber" assessment consists of a visual examination of an area of beach (i) extending approximately 50 metres to one side of the sample point along the strandline, (ii) in a 3 metre wide strip down the beach from the strandline to the water's edge, and (iii) 50 metres back to the sampling point along the water's edge. In addition collection of some information regarding weather conditions and beach use is made. The parameters examined with the determinand numbers are listed below. Those used to set the basis for a virus trigger are marked with "+".

✓ 4 Time of High Tide (Hours)	
28 Wind Direction (Degrees)	+ 9052 Sanitary Towels at Strandline to Water's Edge
76 Water Temperature (Celsius)	+ 9053 Noxious Sewage Odours at Strandline to Water's Edge
1192 Sea State	9054 Terrestrially Derived Litter at Strandline to Water's Edge
2153 Cloud Cover	9055 Oil and Tar at Strandline to Water's Edge
2159 Wind Speed	9061 Dead Marine Life at Water's Edge
9031 Dead Marine Life at Strandline	9062 Animal Faeces at Water's Edge
9032 Animal Faeces at Strandline	+ 9063 Intact Human Faeces at Water's Edge
+ 9033 Intact Human Faeces at Strandline	+ 9064 Grease/Scum Slick at Water's Edge
+ 9034 Grease/Scum Slick at Strandline	+ 9065 Sewage Debris at Water's Edge
+ 9035 Sewage Debris at Strandline	+ 9066 Condoms/Tampon Applicators at Water's Edge
+ 9036 Condoms/Tampon Applicators at Strandline	+ 9067 Sanitary Towels at Water's Edge
+ 9037 Sanitary Towels at Strandline	+ 9068 Noxious Sewage Odours at Water's Edge
+ 9038 Noxious Sewage Odours at Strandline	9069 Terrestrially Derived Litter at Water's Edge
9039 Terrestrially Derived Litter at Strandline	9071 Oil and Tar at Water's Edge
9041 Oil and Tar at Strandline	9076 Number of Bathers (No.)
9045 Dead Marine Life at Strandline to Water's Edge	9077 Number of Beach Users (No.)
9046 Animal Faeces at Strandline to Water's Edge	9078 Number Taking Part in Water Sports (No.)
+ 9047 Intact Human Faeces at Strandline to Water's Edge	9170 Salinity (ppt)
+ 9048 Grease/Scum Slick at Strandline to Water's Edge	9247 Time Relative to High Water (Hours)
+ 9049 Sewage Debris at Strandline to Water's Edge	
+ 9051 Condoms/Tampon Applicators at Strandline to Water's Edge	

All determinands above which have been listed without units are measured on a scale of 0 - 3 as follows:-

- 0 - absence of coded material
- 1 - trace of coded material
- 2 - some at intervals (1-5 items)
- 3 - sufficient to be objectionable (>5 items)

Listed below are brief notes to clarify filling in the log sheet for Garber conditions.

1. HW
Time of high water in British Summer Time nearest to the time of sampling, in hours and minutes.
2. Wind
Wind direction using the first 2 digits of compass bearing.
NORTHERLY = 00 (0 degrees)
EASTERLY = 09 (90 degrees)
SOUTHERLY = 18 (180 degrees)
WESTERLY = 27 (270 degrees)
eg a wind blowing from the North West = 31
3. Temperature
Water temperature degrees Celsius

4. STASEA

State of sea coded as:

0 Calm (Glassy)	Wave height	0 m
1 Calm (Rippled)	Wave height	0 - 0.1 m
2 Smooth (Wavelets)	Wave height	0.1 - 0.5 m
3 Light	Wave height	0.5 - 1.25 m
4 Moderate	Wave height	1.25 - 2.5 m
5 Rough	Wave height	2.5 - 4.0 m
6 Very Rough	Wave height	4.0 - 6.0 m
7 High	Wave height	6.0 - 9.0 m
8 Very High	Wave height	9.0 - 14.0 m
9 Phenomenal	Wave height	Over 14.0 m

5. Cloud Cover

Amount of cloud cover recorded on a scale of 0 to 4:

- 0 - Sun obscured
- 1 - Weak sun, no shadows
- 2 - Weak sun, shadows
- 3 - Sun occasionally obscured by clouds
- 4 - Bright sunshine

6. Wind Speed

Beaufort scale wind force,:

- 0 - Calm
- 1 - Light airs
- 2 - Light breeze
- 3 - Gentle breeze
- 4 - Moderate breeze
- 5 - Fresh breeze
- 6 - Strong breeze

7. Garber Scheme Coded Materials

A transect should be examined of 50 metres either side of an imaginary line passing at a right angle from the shore to the sea through the grid reference if the sampling point.

The quantification of coded materials is clearly subjective but to attempt some standardisation the following has been suggested:-

- 0 - Absence of coded materials
- 1 - Trace of coded materials
- 2 - Some at intervals (1 - 5 items)
- 3 - Sufficient to be objectionable (> 5 items)

Position on beach.

Strandline of last high tide

Between strandline and water's edge

At water's edge

7a Dead Marine Life

Includes crabs, lug worms, heart urchins, etc. Large items such as dolphins and porpoises etc should be reported to the relevant Environmental Protection Officer.

7b Animal Faeces

This refers mainly to dog, horse and sheep droppings. Rafts of dried out sheep droppings brought in by high tides do give rise to complaint at some beaches.

- 7c Intact Human Faeces
Record even small faecal particulates that may arise from crude outfalls.
- 7d Grease / Scum / Slick
This should be sewage derived grease/scum, usually in a visible plume or slick from an outfall.
- 7e Sewage Debris
This is sewage derived materials other than contraceptives, tampon applicators and intact sanitary towels. It may include cotton buds, toilet paper, hair, backing strips of sanitary towels etc.
- 7f Condoms / Tampon Applicators
Often only the thick rubber rings from condoms may be found.
- 7g Sanitary Towels
Complete sanitary towels with absorbant material still present.
- 7h Noxious Sewage Odours
Distinctive sewage smells - not to be confused with decaying seaweed or agricultural smells.
- 7i Terrestrially Derived Litter
Litter and debris eg cans, plastic containers, paper, wood etc which is not likely to have been discharged via a sewage outfall.
- 7j Oil and Tar
Diesel and lubricating oil and the washings from sea going tankers, may be semi solid or globules.

Non Garber Determinands

- 8. Number of Bathers
The number of people in the water.
- 9. Number of Beach Users
The number of people not in the water but on or near the beach.
- 10. Number Water Contact Sports
The number of people windsurfing, water skiing, jet skiing, tubing, surfing etc.