

QUALITY OF SHELLFISH WATERS REGULATIONS, 1994.

In exercise of the powers conferred on the Minister for the Environment by section 30 of the Local Government (Water Pollution) Act, 1977 (No. 1 of 1977), by section 26 of that Act as amended by section 18 of the Local Government (Water Pollution) (Amendment) Act, 1990 (No. 21 of 1990), and after consultation with the Minister for the Marine pursuant to section 29 of the latter Act, I, JOHN BROWNE, Minister of State at the Department of the Environment, hereby make the following Regulations:

Citation.

1. These Regulations may be cited as the Quality of Shellfish Waters Regulations, 1994.

Interpretation.

2. In these Regulations:—

any reference to a Schedule or article which is not otherwise identified is a reference to a Schedule or article of these Regulations; any reference to a sub-article or paragraph which is not otherwise identified is a reference to a sub-article or paragraph of the provision in which the reference occurs;

"the Minister" means the Minister for the Marine;

"shellfish" means bivalve and gasteropod molluscs;

"shellfish waters" means waters at the areas listed in the First Schedule and the Second Schedule, at locations shown on maps prepared by the Minister, which are in need of protection or improvement in order to support shellfish life and growth.

Shellfish Waters and Quality Standards.

3. (1) Subject to sub-article (3), shellfish waters at the areas listed in the First Schedule shall conform with the quality standards specified in the Third Schedule on the basis of, and subject to, the conditions so specified.

(2) Subject to sub-article (3), shellfish waters at the areas listed in the Second Schedule shall conform with the quality standards specified in the Third Schedule on the basis of, and subject to, the conditions so specified not later than the 31st day of December, 1999.

(3) Where sampling frequency is reduced pursuant to article 4, the quality standard concerned shall be conformed with by all samples.

(4) Deviations from the quality standards specified in the Third Schedule shall not be taken into consideration in determining conformity with these Regulations when such deviations are the result of a disaster.

Sampling of Shellfish Waters

4. (1) The Minister shall, in accordance with this article, carry out, or cause to be carried out, sampling of shellfish waters in respect of the parameters specified in the Third Schedule and shall maintain records of the results of such sampling.

(2) Each sampling point, the distance from such point to the nearest point where trade effluent or sewage effluent or polluting matter is discharged to waters, and the depth at which samples are to be taken shall be fixed by the Minister on the basis of local environmental conditions in particular.

(3) (a) Subject to paragraph (b), the frequency of sampling for each parameter in Column 1 of the Fourth Schedule shall be not less than that specified in Column 2 of that Schedule.

(b) Where sampling in relation to any of the parameters referred to in sub-article (1) has produced results which are appreciably better than the standard specified for that parameter in the Third Schedule, the Minister may allow the frequency of sampling to be reduced and, where there is no risk of deterioration in the quality of the water, the Minister may allow sampling to be discontinued.

(4) (a) The methods of analysis specified in Column 3 of the Fourth Schedule shall be used as far as practicable for calculating the value of the parameters concerned.

(b) Where other methods of analysis are used, it must be demonstrated that the results obtained are equivalent or comparable to the results obtained by the methods specified in Column 3 of the Fourth Schedule.

Provisions to Ensure Conformity with Standards.

5. (1) Where shellfish waters do not conform with the quality standards prescribed in these Regulations, the Minister shall, in consultation with the local authority or sanitary authority, establish as far as possible the reasons for nonconformity, whether due to chance, natural factors or to discharges of trade effluent, sewage effluent or other polluting matter and shall adopt an action programme comprising necessary measures where appropriate to ensure conformity with the standards; in particular a local authority or sanitary authority shall, on foot of such action programme, take all steps as may be appropriate in discharge of their functions under the Principal Act to secure conformity with the standards.

(2) A departure from the quality standards prescribed in these Regulations may be granted by the Minister in the event of exceptional weather or geographical conditions.

(3) The granting of a departure shall be subject to such conditions, if any, as the Minister may specify and shall have effect for such period as may be specified by the Minister.

FIRST SCHEDULE.

- 1. Mulroy Bay, County Donegal.
- 2. Killary Harbour, County Mayo.
- 3. Kilkieran Bay, County Galway.
- 4. Clarinbridge/Kinvara Bay, County Galway.

SECOND SCHEDULE.

- 1. Bantry Bay, County Cork.
- 2. Glengarriff Harbour, County Cork.
- 3. Roaring Water Bay, County Cork.
- 4. The Bay at Aughinish, County Galway.
- 5. Cromane, County Kerry.
- 6. Inner Bay, Maharees, County Kerry.
- 7. Kilmakilloge, County Kerry.
- 8. Carlingford Lough, County Louth.
- 9. Clew Bay (East of Old Head) County Mayo.
- 10. Bannow Bay, County Wexford.

THIRD SCHEDULE.

SHELLFISH WATERS QUALITY STANDARDS.

Parameter	Unit of Measurement	Standard
1. pH	pH unit	Not less than 7 nor greater than 9. (Standard to be conformed with by 75% or more of samples over a period of 12 months where sampling is carried out at least once per quarter).

2. Temperature	°C	<p>A discharge affecting shellfish waters must not cause the temperature of the waters to exceed by more than 3°C the temperature of waters not so affected. (Standard to be conformed with by 75% or more of samples over a period of 12 months where sampling is carried out at least once per quarter).</p>
3. Coloration (After Filtration)	mg Pt/l	<p>A discharge affecting shellfish waters must not cause the colour of the waters after filtration to deviate by more than 10 mg Pt/l from the colour of waters not so affected.</p> <p>(Standard to be conformed with by 75% or more of samples over a period of 12 months where sampling is carried out at least once per quarter).</p>
4. Suspended solids	mg/l	<p>A discharge affecting shellfish waters must not cause the suspended solids content of the waters to exceed by more than 20% the suspended solids content of waters not so affected. (Standard to be conformed with by 75% or more of samples over a period of 12 months where sampling is carried out at least once per quarter).</p> <p>(a) 40 % and</p>
5. Salinity	‰	<p>(b) discharges affecting shellfish waters must not cause the salinity of the waters to exceed by more than 10% the salinity of waters not so affected.</p> <p>(Standard to be conformed with by 95% or more of samples over a period of 12 months where sampling is carried out at least once per month).</p>
6. Dissolved Oxygen	Saturation %	<p>(a) > 70% (average value)</p> <p>(b) no individual measurement to indicate a value</p>
7. Petroleum Hydrocarbons		<p>Hydrocarbons must not be present in the shellfish waters in such quantities as to-</p> <p>(a) produce a visible film on the surface of the water and/or a deposit on the shellfish, or</p> <p>(b) have harmful effects on the shellfish.</p> <p>(Standard to be conformed with by 75% or more of</p>

visual examinations over a period of 12 months where examinations are carried out at least once per quarter).

8. Organohalogenated substances

The concentration of each substance in shellfish waters or in shellfish flesh must not reach or exceed a level which gives rise to harmful effects on the shellfish and their larvae and the concentration of each substance in shellfish flesh must be so limited that it does not detract from the quality of shellfish products.

(Standard to be conformed with by 100% of samples over a period of 12 months).

9. Metals: Silver Arsenic
Cadmium Chromium
Copper Mercury Nickel
Lead Zinc mg/1

The concentration of each substance in shellfish waters or in shellfish flesh must not reach or exceed a level which gives rise to harmful effects on the shellfish and their larvae and the concentration of each substance in shellfish flesh must be so limited that it does not detract from the quality of shellfish products. The synergistic effects must be taken into consideration when evaluating the levels of these metals.

(Standard to be conformed with by 100% of samples over a period of 12 months).

10. Faecal coliforms
Number per
100 ml

For shellfish waters where shellfish are normally taken for immediate human consumption without purification, processing or other treatment, faecal coliform counts must not reach a level which results in the shellfish flesh or intervalvular liquid containing 300 or more faecal coliforms.

(Standard to be conformed with by 100% of samples over a period of 12 months).

11. Substances affecting the taste of shellfish

The concentrations of such substances in shellfish waters or in shellfish flesh must be so limited that the taste of shellfish is not impaired.

(Standard to be conformed with by 75% or more of samples over a period of 12 months where

sampling is carried out at least once per quarter).

FOURTH SCHEDULE.

FREQUENCY OF SAMPLING AND METHODS OF ANALYSIS AND INSPECTION.

Column 1 Parameter	Column 2 Frequency and Manner of Sampling	Column 3 Method of Analysis or Inspection
1. pH	Quarterly Measured in situ at the time of sampling.	Electrometry.
2. Temperature	Quarterly Measured in situ at the time of sampling.	Thermometry.
3. Coloration	Quarterly	Filter through a 0.45 micrometre membrane. Photometry method, using the platinum/cobalt scale.
4. Suspended Solids	Quarterly	Filtration through a 0.45 micrometer membrane, drying at 105°C and weighing. Centrifuging (for at least five minutes, with mean acceleration 2,800 to 3,200g), drying at 105°C and weighing.
5. Salinity	Monthly	Conductimetry.
6. Dissolved Oxygen	Monthly, with a minimum of one sample representative of low oxygen conditions on the day of sampling. However, where major daily variations are suspected, a minimum of two samples in one day must be taken.	Winkler's method or electrochemical method.
7. Petroleum Hydrocarbons	Quarterly	Visual examination.
8. Organohalogenated Substances	Half-yearly	Gas chromatography after extraction with suitable solvents and purification.
9. Metals: Silver	Half-yearly	Spectrometry of atomic absorption

Arsenic Cadmium
Chromium Copper
Mercury Nickel Lead
Zinc

preceded, where appropriate, by
concentration and/or extraction.

10. Faecal Coliforms

Quarterly

Method of dilution with fermentation
in liquid substrates in at least three
tubes in three dilutions. Subculturing
of the positive tubes on a
confirmation medium. Count
according to MPN (most probable
number). Incubation temperature
 $44^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$.

11. Substances
affecting the taste of
shellfish

Where the presence of any of
these substances is presumed.

Examination of the shellfish by
tasting.

DATED this 8th day of July, 1994.

JOHN BROWNE,

Minister of State at the Department of
the Environment.

EXPLANATORY NOTE.

These Regulations prescribe quality standards for shellfish waters and designate the waters to which they apply, together with sampling and analysis procedures to be used to determine compliance with the standards. The Regulations give effect to Council Directive 79/923/EEC of 30 October 1979 on the quality required of shellfish waters.