



**CHARGING FOR
DISCHARGES
S C H E M E**

GUIDANCE TO THE
AGRICULTURAL INDUSTRY



NRA

National Rivers Authority

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1. WHAT IS THE SCHEME FOR?

The National Rivers Authority (NRA) has introduced a charging scheme to recover the cost of operations for control and monitoring of consented discharges and associated receiving waters. With effect from 1st July 1991, the NRA will levy annually a charge for each consented discharge and effluent to recover these costs. The current arrangements for consent application charges are incorporated in this scheme.

This brochure provides guidelines on how the scheme applies to the Agricultural Industry and should be used with the Charging Scheme Explanatory Booklet which can be obtained from NRA Regional Offices.

2. HOW WILL IT BE APPLIED TO MY BUSINESS?

2.1 GENERAL

The charge will be levied for all discharges of effluents authorised by consents. There is no appeal against the payment of charge.

a) STATUS OF CONSENTS

There may be consents still in force for sites which have been closed or redeveloped or, where the consent conditions do not reflect the actual nature, composition and volume of the discharge.

Such consents are eligible for, a) revocation where discharge has ceased, or b) a review of the consent where the discharge has changed. However, the NRA will only revoke or review consents on justifiable grounds.

b) DEEMED CONSENTS

Many applications for consents under the 1961 Prevention of Pollution Act were granted unconditionally in terms of numerical limits on volume and quality. These are termed as Deemed Consents and will be dealt with in accordance with section 5.

Where the discharge is for sewage effluent from the farm house used for domestic household purposes and the volume of effluent is less than 5 cubic metres per day, no charge will be made during the period of the scheme.

VALIDATION OF CONSENT INFORMATION

The NRA is currently undertaking a validation of consents and plans to complete this for the majority of discharges during 1991.

Consent holders will be contacted where necessary.

The validated consent information will be used to determine the charging parameters and calculate the annual charge. Reviews of consents will be carried out where existing conditions are no longer appropriate, but it is likely that this task will extend beyond the commencement date of the scheme. Therefore, the NRA has made provision for temporary charging to reflect changed circumstances, and thus avoid inappropriate charges.

If you have any queries regarding the validation or any variation of your consented discharge and its charging parameter banding and factors, please consult your local NRA office.

MULTIPLE DISCHARGES AND EFFLUENTS

A consent may authorise the discharge of one or more effluents via one or more outlets. In such circumstances, the discharger should consult the NRA.

2.2 WHICH DISCHARGES WILL BE CHARGED UNDER THE SCHEME?

The majority of liquid and solid wastes generated by agriculture are disposed of to land and, provided this is done in line with the Code of Good Agricultural Practice, should not cause pollution of watercourses and groundwater.

DISCHARGES NOT REQUIRING CONSENT

The following discharges do not require consent and are not chargeable:

- a) Discharges to land e.g. manure, dirty water irrigation and slurry, or from land and field drains which are not connected to agricultural premises, or treatment systems.
- b) Discharges of uncontaminated surface water, - rainfall and/or groundwater related drainage which is not contaminated by trade effluents from farming processes and activities, (e.g. roof drainage, car parks, roads.)

(Uncontaminated surface water does not legally require a consent for discharge although a discharger may apply for and may be granted, or refused consent at the discretion of the NRA.)
- c) Discharges of sewage and trade effluent which discharge onto or into land, (e.g. septic tank effluents to sub soil irrigation systems, not affecting watercourses and water in underground strata.)

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NB: There may be situations where surface water, sewage and trade effluents to land and streams need to be controlled for pollution prevention purposes.

Control of these discharges is provided for under section 107 (2) (a) and (b) of the Water Act 1989, by the serving of a PROHIBITION NOTICE. A prohibition notice may be served to prevent a discharge being made or, the discharge may be made subject to a consent with conditions. The latter is eligible for an annual charge.

- d) Discharges from Crown Property, e.g. any site drainage, sewage or trade effluent.

DISCHARGES REQUIRING CONSENT

The following discharges will require a consent to discharge to watercourse, and hence are chargeable under the NRA scheme;

- a) All discharges of trade effluent from premises and fixed plant carrying out agricultural, horticultural, aboriginal and aquacultural activities, e.g. effluents from farm waste treatment systems; dairies (parlour washings and cooling water); pesticide spray washing areas; food processing, fish rearing, cress and crayfish farms.

'Trade effluent' means any effluent which is discharged from premises used for any trade or industry, other than surface water and domestic sewage.

'Fixed Plant' means any plant which is permanently secured to the ground.

- b) Discharges of sewage effluent to watercourses and waters contained in underground strata, (e.g. septic tanks and soakaways discharging to underground strata.)
- c) Contaminated Site Drainage, - rainfall and/or groundwater related drainage from premises which are contaminated by trade or sewage effluent, (e.g. drainage from farm collecting yards; food preparation areas; holding pens, etc.)

3. HOW IS THE CHARGE WORKED OUT?

Charges are calculated by using a Formula which was developed to recover the costs incurred by the NRA on consented discharges.

The Charging Formula

The charging formula is based on:

1. the consented volume
2. the content of the discharge (its chemical and physical composition)
3. the type of receiving water

These charging parameters and their associated banding and weighting factors are detailed in the Charging Scheme Explanatory Booklet. A summary table of charging bands and the charge formula are given in Appendix A.

4. HOW ARE THE CHARGEABLE PARAMETERS AND BAND FACTORS DETERMINED?

These are determined from the volume, quality and receiving water conditions which are contained in the consent

5. WHAT IF THERE ARE NO CONDITIONS?

SOME DISCHARGE CONSENTS DO NOT SPECIFY VOLUME AND/OR CHEMICAL CONDITION LIMITS (e.g. Unconditional Deemed Consents and Descriptive Consents). Such a discharge will be allocated to a band according to the type of effluent, thus site drainage with no volume or quality conditions is defaulted to the 20 - 100 m³/Day (cubic metres/Day) volume range and a content band of Band E.

6. WHO WILL ALLOCATE THE CHARGEABLE VOLUMES, CONTENT AND RECEIVING WATER BANDS?

This will be done by NRA staff for all charging parameters. Full details of the charging bands and calculation will be contained in the charges invoice.

Prior to the commencement of the charging scheme, the majority of consent holders will be contacted to verify the details contained in their consents.

7. HOW CAN I CHECK WHETHER THE BANDINGS ARE CORRECT?

You can determine the charging bands and factors for your consent by using the following procedures:

7.1 EXAMINE YOUR CONSENT -

in it, there will usually be conditions stating:

- the source and type of discharge
- the amount of effluent which can be discharged, e.g. a total volume of 100 cubic metres per day maximum, and/or at a flow rate, 500 litres per hour.
- the allowable quality, i.e. what substances can or cannot be discharged, e.g. suspended solids - 30 mg/l, Biochemical Oxygen Demand (BOD) 20 mg/l. (mg/l = milligrams per litre)
- the receiving watercourse.
- other conditions which could relate to the type of treatment plant required and its operation, - i.e. Descriptive Consents.

7.2 TO DETERMINE THE CHARGEABLE VOLUME,

use the consented maximum daily volume, where this is stated. If only a rate of flow is stated, then convert to a maximum daily volume, which must be stated in CUBIC METRES PER DAY, (m^3/Day).

e.g. 1) 500 litres per hour is converted to m^3/DAY

$$= \frac{500 \times 24}{1000}$$

$$= 12 \text{ m}^3/\text{DAY}$$

2) 22,000 gallons/DAY = $\frac{22,000}{220}$

$$= 100 \text{ m}^3/\text{DAY}$$

- Where the stated volume is given as daily dry weather flow and the discharge contains rainfall, then 3 times the stated volume is used to allocate the volume band.
- Where the discharge contains no rainfall, the stated volume is used to allocate the band.
- When you have determined the volume figure, the volume band and factor can be allocated by comparison with the bands listed in Appendix A. i.e. $100m^3/\text{DAY}$ is in Band > 20 - $100m^3$ Factor is 1.0.

- When there is NO volume condition, then Band > 20 - $100m^3$ is allocated.

7.3 TO DETERMINE THE CONTENT BAND

to which your discharge will be allocated, you will need to identify the chemical determinands, i.e. quality conditions in the consent, and the type of effluent, i.e. sewage or trade effluent.

The example on page 6 contains BOD (Biochemical Oxygen Demand), Suspended Solids and Ammonia and is a trade effluent.

These are compared with the Content Bands listed in the Scheme booklet. The example contains no determinands in BANDS A or B, but is organic in nature and a trade effluent, and thus falls into BAND C : FACTOR 3.0.

CONSENTS WITH NO NUMERICALLY LIMITED CONSENT CONDITIONS

Where there are No Quality conditions, (i.e. Deemed or Descriptive consents) the discharge is allocated to the appropriate band by reference to the description of the effluents and the Bands. E.g. Contaminated site drainage with No Quality condition would fall into Band E; cooling water with no Quality conditions would be Band G; discharges from pesticide treatment plants (e.g. Sentinal type) with no numerical quality conditions would be Band D.

7.4 TO ALLOCATE A BAND FOR RECEIVING WATERS,

it is necessary to identify the watercourse into which the effluent is directly discharged and whether it is (a) inland surface water or (b) groundwater, or (c) estuary, or (d) coastal water. This is usually stated on the consent, but where there is any doubt, this can be verified by the NRA.

In the example, the effluent discharges to an inland surface water, thus FACTOR 1.0 is applied.

8. CALCULATION OF CHARGE

The Annual Charge will be calculated by the NRA from the charging bands determined from the consent, using the formula and factors listed in Appendix A.

Payment of the Annual Charge shall be due on 1 April except in the first year of the Scheme when it shall be due on the commencement of the Scheme.

THE CHARGE FORMULA

The charges will be assessed on the following basis:

$$\text{Annual charge } \pounds = R (V_b \times C_b \times RW_b)$$

where R = national unit cost which is presently estimated at £270.

V_b = Weighting factor based on volume band.

C_b = Weighting factor based on content band.

RW_b = Weighting factor based on receiving water band.

Example

A discharge of treated slurry effluent with a maximum daily volume of 100 m³/Day to an inland watercourse with consented quality conditions for solids (30 mg/l), BOD (20 mg/l) and ammonia (10 mg/l) only will be charged as follows:

	Factor
Volume Band (20 - 100 m ³ /Day)	1.0
Content Band - C e.g. trade effluent of organic nature with numerical limits.	3.0
Receiving water - surface - S	1.0
National Unit Rate - R	£270

$$\begin{aligned} \text{Therefore charge} &= R(V_b \times C_b \times RW_b) \\ &= \pounds 270 \times 1.0 \times 3.0 \times 1.0 \\ &= \pounds 810 \text{ per annum} \end{aligned}$$

NB: Further examples for discharges from the farming industry are given in Appendix B.

APPENDIX A: CHARGING BANDS AND WEIGHTING FACTORS

CATEGORY	BAND	FACTOR
Volume (M ³ /DAY)	0-5	0.4
	>5-20	0.7
	>20-100	1.0
	>100-1,000	2.0
	>1,000-10,000	3.0
	>10,000-50,000	5.0
	>50,000-150,000	9.0
	>150,000	14.0
Content	A	15.0
	B	5.0
	C	3.0
	D	2.0
	E	1.0
	F	0.5
	G	0.3
Receiving Water	Groundwater & Land	0.5
	Coastal	0.8
	Surface	1.0
	Estuarial	1.5

APPENDIX B: CHARGES FOR DISCHARGE - General examples

N.B. Total Units is product of volume, content and waters factor

TYPE OF DISCHARGE	VOLUME BAND		CONTENT		RECEIVING WATERS		Total Units (V x C x R _w)	Unit Cost £	Annual Charge £
	VOLUME BAND m ³ /d	FACTOR V _b	CONTENT BAND	FACTOR C _b	WATERS	FACTOR R _w			
	0 - 5	0.4	A	15.0	G = Ground	0.5	'x'	270	'y'
	>5 - 20	0.7			C = Coastal	0.8			
	>20 - 100	1.0	B	5.0	S = Surface	1.0			
	>100 - 1,000	2.0	C	3.0	E = Estuarial	1.5			
	>1,000 - 10,000	3.0	D	2.0					
	>10,000 - 50,000	5.0	E	1.0					
	>50,000 - 150,000	9.0	F	0.5					
	>150,000	14.0	G	0.3					
LIVESTOCK FARMS									
Treated slurry effluent (MDV 50m ³ /day: BOD condition)	>20 - 100	1.0	C	3.0	S	1.0	3.0	270	810
DAIRY DRAINAGE									
1. Parlour washings (MDV m ³ /day) with numeric limits, with descriptive conditions	0 - 5	0.4	C	3.0	S	1.0	1.2	270	324
	0 - 5	0.4	D	2.0	S	1.0	0.8	270	216
2. Cooling water (MDV 10 m ³ /day) (Direct)	>20 - 100	1.0	E	1.0	S	1.0	1.0	270	270
Collecting yard drainage (no volume or quality conds.)	>20 - 100	1.0	E	1.0	S	1.0	1.0	270	270
ABATTOIRS									
Treated eff. (organic) (MDV 110 m ³ /day) BOD conditions	>100 - 1,000	2.0	C	3.0	S	1.0	6.0	270	1,620
CREAMERIES									
Milk waste treated (organic) (MDV 1200 m ³ /day - BOD conditions)	>1,000 - 10,000	3.0	C	3.0	S	1.0	9.0	270	2,430
FOOD PROCESSING FACTORY									
(MDV 1500 m ³ /day - BOD conditions)	>1,000 - 10,000	3.0	C	3.0	S	1.0	9.0	270	2,430
FISH FARM									
Small	>1,000 - 10,000	3	G	0.3	S	1.0	0.9	270	243
Large	>150,000	14	G	0.3	S	1.0	4.2	270	1,134
PESTICIDE WASHINGS									
Spray Washings (Pesticide Treatment Plant)	0 - 5	0.4	D	2.0	G	0.5	0.4	270	108
Sheep Dip	0 - 5	0.4	A	15	G	0.5	3.0	270	810
DEEMED CONSENTS									
Process water - parlour	>20 - 100	1.0	D	2.0	S	1.0	2.0	270	540
Site drainage - collecting yard	>20 - 100	1.0	E	1.0	S	1.0	1.0	270	270
Admixed effluent	>20 - 100	1.0	D	2.0	S	1.0	2.0	270	540

MDV - Maximum Daily (24 hours) Volume

NRA OFFICES

ANGLIAN

Kingfisher House
Goldhay Way
Orton Goldhay
Peterborough PE2 0ZR
Tel: (0733) 371811

NORTHUMBRIAN

Eldon House
Regent Centre
Gosforth
Newcastle-On-Tyne NE3 3UD
Tel: (091) 213 0266

NORTH WEST

Richard Fairclough House
Knutsford Road
Warrington
Lancs WA1 2QG
Tel: (0925) 53999

SEVERN TRENT

Sapphire East
Streetsbrook Road
Solihull
West Midlands B91 1QT
Tel: (021) 711 2324

SOUTHERN

Guildbourne House
Chatsworth Road
Worthing
West Sussex BN11 1LD
Tel: (0903) 820692

SOUTH WEST

Manley House
Kestrel Way
Exeter EX2 7LQ
Tel: (0392) 444000

THAMES

Kings Meadow House
Kings Meadow Road
Reading RG1 8DQ
Tel: (0734) 535000

WELSH

Rivers House/Plas-yr-Afon
St Mellons Business Park
St Mellons
Cardiff CF3 0EG
Tel: (0222) 770088

WESSEX

Rivers House
East Quay
Bridgwater
Somerset TA6 4YS
Tel: (0278) 457333

YORKSHIRE

Rivers House
21 Park Square South
Leeds LS1 2QG
Tel: (0532) 440191