
INFORMAL
CONSULTATION ON
NEW ABSTRACTION
CHARGES
FROM APRIL 1993



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NRA

National Rivers Authority

Guardians of
the Water Environment

BACKGROUND

PURPOSE

This consultation paper sets out the National Rivers Authority's (NRA's) draft proposals for future abstraction charges. It has been published so that abstractors, interested individuals and organisations can give their views in order to help the NRA develop a new abstraction charges scheme. It will replace the 10 very different regional schemes currently in use.

FIRSTLY, WHY IS IT NECESSARY TO MAKE A CHARGE?

The money from abstraction licences is needed to cover the cost of the NRA's work on water resources. There is no other significant source of income from the government or elsewhere and all the money raised is spent entirely on water resources work. It is not used to subsidise other activities.

WHAT IS THE INCOME USED FOR?

The income is used to help the NRA fulfil the duties it has been given primarily under the Water Resources Act 1991.

The NRA's aim and objectives are described below.

ITS AIM IS TO:

Assess, manage, plan and conserve water resources and to maintain and improve the quality of water for all those who use it.

ITS OBJECTIVES ARE:

To develop and implement a water resources strategy which takes appropriate account of both environmental and abstraction requirements and which ensures that water resources plans are developed in a consistent manner throughout England and Wales.

To develop and implement consistent groundwater protection and land use management policies to protect water resources, including the identification and monitoring of Nitrate Sensitive Areas.

To develop and implement a nationally consistent approach to abstraction and impounding licences including their determination, variation, charging, policing, enforcement and revocation.

To review the extent of over-abstraction of catchments and to develop proposals and implement solutions to alleviate the problems where justified.

To review rising and falling groundwater level problems and their possible solutions.

To collect, process and maintain water quantity and water quality data for the management and planning of surface and groundwater resources by effective and efficient methods.

To ensure proper consideration of water resources issues by statutory advisory committees.

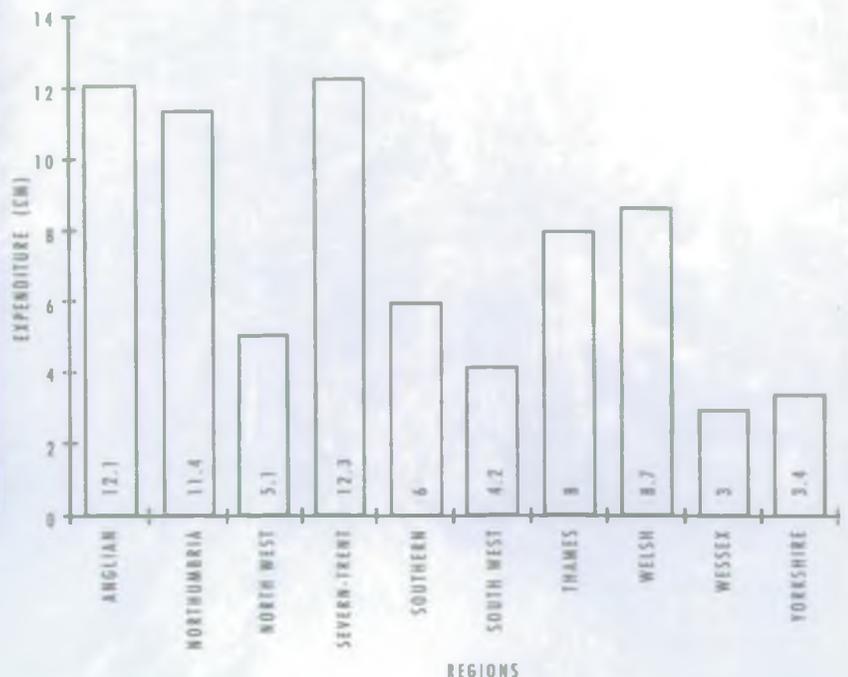
HOW MUCH MONEY IS NEEDED?

A total of £74.2m is needed in 1991/92 to pay for the NRA's water resources work. This is spent in each of the ten NRA regions as shown in figure 1.

It is an important principle that the NRA must only raise sufficient income, taking one year with another, to recover its costs on water resources, ie it should not make a profit or a loss. The amount paid by each of the main groups of abstractors is shown in figure 2.



FIGURE 1 WATER RESOURCES EXPENDITURE 1991/92



WATER RESOURCE PROTECTION

Protection of the quality of waters which are used or are available for use is an important NRA activity for developing and maintaining a sustainable water resources strategy.

In England and Wales up to 50,000 different abstractions take place daily from inland waters and from groundwaters. Maintenance of satisfactory water quality is essential for almost all users and particular emphasis is placed on the need to prevent pollution of resources rather than taking action to alleviate problems once they have occurred.

Of particular importance is the protection of groundwater from pollution because once polluted they take a very long time, if ever, to recover.

PLANNING LIAISON

The NRA is a statutory consultee for local planning authorities providing information on the availability of water resources for potential development and on the implications of development proposals for water quality.

ALLEVIATION OF LOW FLOWS

The NRA has already identified 40 key sites which suffer unacceptably low flows as a result of over-abstraction. The top 20 sites are shown in figure 3. The alleviation of the resulting low flows is a high priority for the NRA. The majority of these problems result from abstractions from groundwater which lower the natural water table and lead to a reduction in base flow (ie groundwater flow into rivers). In many cases the abstractions are authorised by Licences of Right which were granted under the Water Resources Act 1963. These licences were granted by predecessor organisations who were legally obliged to licence such abstractions as existed when the Act was introduced.

A breakdown of the NRA expenditure across key activities is shown in figure 4.

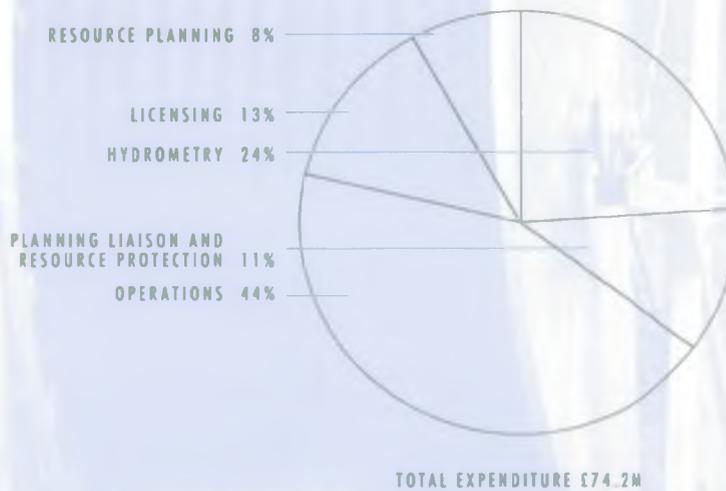
EXISTING CHARGES - WHY CHANGE?

The NRA inherited the ten existing charging schemes which apply to the areas of the former Regional Water Authorities of England and Wales. These schemes have some points in common, but they are very different from one region to another and the NRA, as a national organisation, would like to put this right.

The present scheme of charges is a rather long and complicated document (over 100 pages in length), with more than 450 different combinations of charge. This makes it all rather confusing for the abstractor and unnecessarily bureaucratic.

The NRA would therefore like to have a simpler arrangement, which is consistent across the whole of the NRA. It also feels it is important that abstractors generally see the new scheme as being fair - and that is why it wants your views.

FIGURE 4:
WATER RESOURCES
EXPENDITURE
1991/92



PROPOSED SCHEME

GENERAL PRINCIPLE

The NRA has already consulted with its regional statutory advisory committees in preparing its draft proposals and has made amendments in the light of their views. It would now like to invite wider comment before coming to a firm proposal.

The general aim of the new scheme of abstraction charges is to make the scheme as simple as possible, but consistent with treating abstractors equitably.

A principle of the new scheme is that in total it is a cost recovery scheme, but within this charges should reflect the impact of an abstraction on water resources and its associated level of NRA activity.

The detail of the proposed scheme is outlined in the following sections but briefly comprises:

- **An application charge**
- **An annual charge**

The level of each of these charges will be announced by the NRA during the consultation period. At this stage we particularly wish to explain the principles of the proposed scheme rather than the exact rate of charge.

APPLICATION CHARGE

A single application charge is proposed for licences either to impound or to abstract water.

Combined licences to impound and abstract will be charged at the single application rate of charge.

These charges are to be set each year by the NRA and reflect only the administrative costs associated with processing applications.

ANNUAL CHARGES

It is proposed that annual charges for abstraction will be based on the licensed volume authorised to be abstracted each year, weighted by factors which reflect the general aim and principle described above.

The licensed volume is used because once licensed, this quantity has to be protected from derogation by other abstractors. It is the NRA's job to do this. However, the NRA cannot guarantee the water being available as this depends on the weather.

The proposed weighting factors are:

- | | |
|---------------|--|
| Source | <i>the nature of the source from which water is abstracted</i> |
| Season | <i>the season of the year in which water is abstracted</i> |
| Loss | <i>the net loss of the abstraction to water resources</i> |

These weighting factors have been divided into categories to describe the nature of the abstraction as shown in the table below:

Source		Season		Loss	
<i>Supported</i>	<i>3.0</i>	<i>Summer</i>	<i>1.6</i>	<i>High</i>	<i>1.8</i>
<i>Unsupported</i>	<i>1.0</i>	<i>All Year</i>	<i>1.0</i>	<i>Medium</i>	<i>1.0</i>
<i>Tidal</i>	<i>0.1</i>	<i>Winter</i>	<i>0.16</i>	<i>Low</i>	<i>0.015</i>
				<i>Very Low</i>	<i>0.0015</i>

HOW THE CHARGE IS CALCULATED

The annual charge is calculated by multiplying the authorised annual volume by the Source, Season and Loss factors to calculate the number of chargeable units of water.

This is then multiplied by the regional standard unit charge which will be set each year by the NRA for each of its ten regions. It could be a national unit charge but at present the NRA is not proposing this. However, you may have a different view.

The charge will then be calculated as follows:

Charge =

$$\text{Annual Licensed Volume} \times \text{Source Factor} \times \text{Season Factor} \times \text{Loss Factor} \times \text{Standard Unit Charge}$$

Examples of how the charge would be calculated are:

- i) A licence authorises 100,000m³ per annum for spray irrigation purposes direct from a watercourse during the months of April to August.
- ii) A licence authorises 5000m³ per annum from a borehole all year round for the purpose of supplying a guest house.

Reference to the description of categories will show that the following weighting factors would apply:

	Volume '000m ³	Source Factor	Season Factor	Loss Factor	Standard Unit Charge £/1,000m ³	Annual Charge (£)
i)	100	x 1.0	x 1.6	x 1.8	x 5.50	= 1,584.00
ii)	5	x 1.0	x 1.0	x 1.0	x 5.50	= 27.50

The unit rate of charge shown here is for example purposes only. The actual rate of charge in any of the ten regions could be higher or lower than this figure.



DESCRIPTION OF WEIGHTING FACTORS

SOURCE

The scheme distinguishes between three different types of source as described below.

Unsupported

This category covers the majority of abstractions which will be made from 'run of the river' surface sources, underground strata, and any source which is not in either of the other source categories. The general interdependence of surface and underground sources implies that a common factor would be appropriate and since this is the reference against which other sources will be assessed will have a weighting factor of 1.0.

Supported

The river flow in a number of sources is augmented by the NRA to support abstractions further downstream. The augmentation works may be in the form of impounded storage for river regulation, usually by financial arrangement with a water undertaker, or by works provided directly by the NRA such as river support boreholes or river transfer schemes. It is considered that abstractors who receive a material benefit from such works provided by the NRA should have a source factor higher than the unsupported rate and a source factor of 3.0 is considered appropriate. This would apply to the total annual volume authorised for abstraction from the augmented source.

Abstractions made directly from a river regulation reservoir used to support these sources will also be classed as a supported abstraction, as will an abstraction made from a source of supply which draws water from a supported source, such as a canal taking water from a supported river. Minor abstractions from these sources (less than 5,000m³ per day) will however be classed as unsupported, since the augmentation works are generally large in scale and are provided to support more significant abstractions from the augmented river.

A schedule of supported sources is shown in table 1.

Tidal

Abstractions below the saline limit generally have a lower impact on water resources than those from freshwater sources. These abstractions may however still require careful management to protect for example the movement of migratory fish through river estuaries. In recognition of the generally low impact of these abstractions a weighting factor of 0.1 is proposed.

SEASON

The weighting factors for Season reflect the greater impact of abstractions on resources during the summer months when water is at its scarcest and a basic distinction is therefore needed between summer and winter abstractions and abstractions made all year round. In order that abstractors may know in advance the level of charges that will apply in each year, the variation in charges should be geared to the calendar and not to actual flows and levels. The relative impact of the summer and winter abstractions is a complex assessment and can vary between catchments and between years. In overall terms however, it is felt that a difference of an order of magnitude would be appropriate.

The weighting factors for summer and winter have taken into account the need to ensure that a year round abstraction charged at the sum of the winter and summer rates will give the same charge as if the abstraction was charged at the all year rate.

All Year

All year abstractions are abstractions which are authorised to be abstracted throughout the year. This is the reference category and will have a weighting factor of 1.0.

Winter

Winter abstractions are those which are authorised to be made wholly within the five months, November to March inclusive and will have a factor of 0.16.

Summer

Summer abstractions are those which are authorised to be made within the months April to October inclusive, and will have a factor of 1.6.

LOSS

The usable proportion of water returned after use by abstractors varies considerably and it therefore seems sensible to make some allowance for this factor in charging. This net loss to water resources is generally related to the purpose of the abstraction and the disposal of the water after use. The loss factor therefore relates various purposes of abstraction to High, Medium, Low and Very Low Loss depending on the consumptive nature of the abstraction. Abstractions are allocated to the four categories with weighting factors as shown in Table 2.

NAME OF SOURCE	NATIONAL GRID REFERENCE	
	UPSTREAM LIMIT	DOWNSTREAM LIMIT
ALED	SH 915 599	SH 957 703
ALWEN	SH 974 539	SJ 061 425
ANCHOLME	TF 032 875	SE 975 211
BLACKWATER	TL 644 353	TL 839 084
CLWYD	SJ 113 619	SJ 057 721
CLYWEDOG	SN 912 870	SN 954 847
DEE	SH 941 358	SJ 408 658
DWYFOR	SH 558 440	SH 505 430
GLOUCESTER & SHARPNESS CANAL	SO 827 184	SN 667 022
LITTLE OUSE	TM 084 910	TF 732 870
SEVERN	SN 954 847	SO 818 217
		SO 822 182
STOUR	TL 680 560	TM 101 330
TEES	NZ 005 215	NZ 463 191
TOWY	SN 786 472	SN 432 205
TRYWERYM	SH 881 399	SH 941 358
TYNE	NY 632 924	NZ 121 646
TYNE-TEES AQUEDUCT	NZ 026 617	NZ 005 215
WAVENEY	TM 092 698	TM 494 935
WEAR	NZ 012 377	NZ 294 524
WITHAM	SK 974 712	TF 323 445
WYE	SN 926 645	SO 539 051
YORKSHIRE OUSE	SE 433 714	SE 528 577

TABLE 1: SCHEDULE OF SUPPORTED SOURCES

TABLE 2: LOSS CATEGORY FOR PURPOSE OF ABSTRACTION

CATEGORY	PURPOSE	WEIGHTING
HIGH LOSS	This includes abstractions for spray irrigation, evaporative cooling, boiler feed and other replenishment water.	1.8
MEDIUM LOSS	This includes abstractions for public and private water supply, bottling, industrial processes and abstractions for agricultural purposes including anti-frost spraying but excluding spray irrigation, fish farms and water cress growing.	1.0
LOW LOSS	This includes abstractions for mineral washing and non-evaporative cooling and abstractions for purposes listed below but which do not meet the Very Low Loss criteria.	0.015
VERY LOW LOSS	This includes abstractions for hydro-power generation of greater than 5 megawatts, amenity pools throughflow, fish farms and water cress growing if they: <i>(a)</i> do not reduce the NRA's ability to licence new abstractions below the point of abstraction and point of return, and; <i>(b)</i> do not have any adverse environmental impact.	0.0015
	<i>Abstractions for purposes not specified in this table will be regarded as High Loss unless otherwise determined by the NRA on the basis of evidence provided by the abstractor.</i>	

PAYMENT OF CHARGES

The NRA proposes that each abstraction licence charge will be subject to a minimum annual charge and that all charges will be due on 1 April payable in advance for the forthcoming year. Examples of the relative charges for different types of abstraction are shown in figure 5.

REDUCED CHARGES

In some cases abstraction charges have been reduced under the existing charging scheme for particular reasons. The NRA intends that these reductions - usually made as Section 60 Agreements under the Water Resources Act 1963 - will cease to have effect under the new scheme, but that new agreements will be made where appropriate to cover the changed situation.

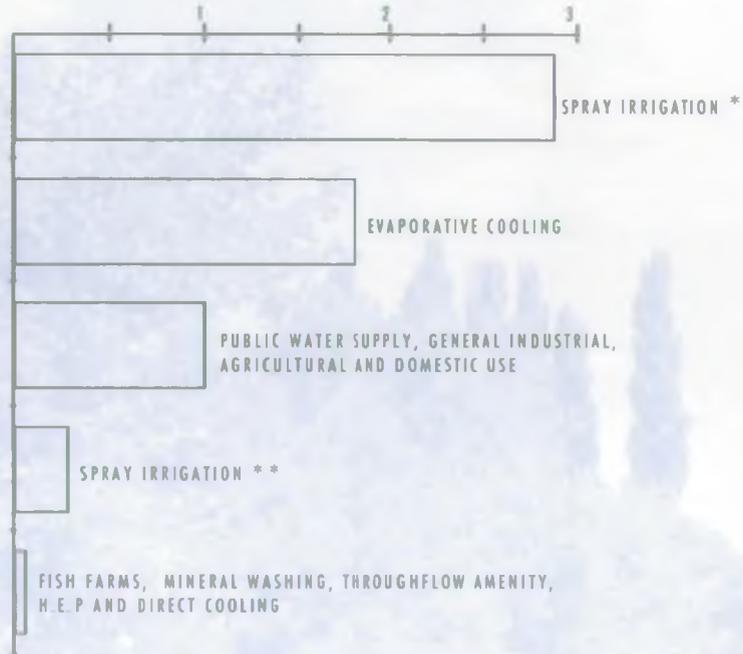
Transfers of water from one source to another - where the water is not used for any purpose en-route will only be charged once.

Reduced charges will also apply to groups of licences where the individual licensed abstractions are restricted by an overall licensed limit which is less than the sum of the individual licensed quantities. It is proposed that the charge in these cases will be based on the overall licensed quantity.

The NRA must by law, provide special agreements for spray irrigation abstractions. This is because of the particular problem faced by spray irrigators in predicting their demands and the likelihood that in some years the quantities abstracted by them would fall far short of the quantities authorised. It is proposed that the new scheme will incorporate a two-part tariff type arrangement with a 50% basic charge payable on 1 April, with the remaining charge dependent on the quantity actually abstracted.

In addition, the NRA is not allowed to make annual charges for abstractions for use in the production of electricity or any other form of power by any generating station of a capacity of not more than five megawatts. Neither may the NRA make charges for licensed abstractions from underground strata for agricultural purposes, other than spray irrigation, where the quantity abstracted is less than 20m³ in any period of twenty four hours.

FIGURE 5: RELATIVE WEIGHTING VALUES FOR TYPICAL ABSTRACTIONS



(BASED ON AN ALL YEAR ABSTRACTION FROM UNSUPPORTED SOURCE EXCEPT WHERE SHOWN)

* SUMMER ABSTRACTION

** ABSTRACTION DURING SUMMER FROM WINTER STORE

WHAT NEXT?

The NRA will be holding meetings with representatives of various groups of abstractors and other interested organisations to hear their views on these proposals. It would also like to hear from individuals who feel they can make a useful contribution. It is not too late, no firm decisions have yet been made and the NRA wants your views before it makes its final proposals.

WHAT YOU SHOULD DO

The NRA wants to hear your views whether you support the proposal or not.

It would be most helpful if you gave your thoughts to an organisation to which you belong so that they can represent the views of their members. If this is not possible we would be pleased to hear from you directly.

The closing date for comments is **31 March 1992**. Responses marked 'New Abstraction Charges' should be sent to:

**National Rivers Authority
Rivers House
Waterside Drive
Aztec West
Almondsbury
Bristol
BS12 4UD**

WHEN WILL THE CHARGES BE INTRODUCED?

The NRA will consider all the responses to the new proposals during the first half of 1992 and only when it is satisfied that it has taken all views into account will it formally advertise the new scheme in the national press. At that time anyone may take the opportunity of making formal representation to the Department of the Environment. The aim will be to complete this process to introduce the new charges in April 1993.