



Technical Services available to NRA staff from.....



WRc, Medmenham



Institute of Hydrology, Wallingford



Freshwater Biological Association, Ambleside



Aquatic Weeds Research Unit, Sonning

National Rivers AU'
Information Centre
Head Office

Class No

Accession No AMWS

A technical enquiry service is available to NRA staff in the relevant Core Functions on the following topics:

- Environmental quality sampling and statistics
- Environmental toxicology
- Wastewater treatment processes
- Analytical quality control and laboratory method development
- Water quality instrumentation
- Specialist enquiry service, Water Quality
- Specialist enquiry service, Water Resources
- Freshwater biology
- Control of aquatic and bankside weeds

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INTRODUCTION TO TECHNICAL SERVICES CONTRACTS

What are external Technical Services?

Technical Services have been set up by the NRA to enable its staff to call on advice in designated topics at national centres outside the NRA. The services are intended to enable NRA staff to have ready access to expertise and facilities which they may require in the course of their work - whether day-to-day operations or developmental. The services are not normally intended for enquiries which need more than one or two days' resources. Such services would need to be planned and procured separately through the Function or Region concerned.

What topics are covered?

Pages 3 to 15 describe the areas covered by each Technical Service. If you are unsure whether this is what you need for your query, call the Contact Point at the national centre concerned.

How do I use a Technical Service?

Pages 17 to 19 give instructions on the use of Technical Services. You should not use Technical Services without being reasonably sure that the information you need is not accessible to you within the NRA. You should, for example, check with colleagues, or the Region's Technical Services Department, or at a national level with the NRA's European Affairs Officer. The national Information Centre at Head Office should be approached initially for literature books and other published information. The Information Centre may be able to answer queries from its own resources; if not, staff will approach the national centre libraries with whom they have good contacts.

It is NRA policy to reduce progressively its dependence on external services where these are more appropriately provided in-house.

Who pays, and what does it cost?

Technical Services are principally funded via the national R&D budget by the Function concerned. (The rationale for funding via the R&D budget is that many issues covered by Technical Services are associated with innovation and/or involve the dissemination to the NRA of new knowledge.)

Some services are broken down into (a) innovation, and (b) consultancy elements. The latter apply to areas of the service which simply involve dissemination of existing information.

Expert advice is never cheap. The NRA has agreed standing charging rates for various external staff involved at the national centres. The cost estimate for any enquiry must always be agreed before the service is rendered (see page 17).

What type of response will I get, and how soon?

You get what you specify and agree in the requisition (see page 19). It is important to agree on the minimum necessary detail of the reply to avoid wasting resources. Where a quick verbal reply is requested, this will be given as soon as reasonably possible - urgent advice can usually be given by phone within one hour of enquiry. Where a written reply is requested, the normal standard is to reply within a week. The reply will typically consist of a brief assessment of the issue/problem, recommendations, and copies of any relevant information - including lists of references, technical articles, etc. A reply can be provided more quickly on specific request. If appropriate, expert staff can attend NRA meetings to provide advice.

TOPICS COVERED BY TECHNICAL SERVICES

1. WRc

Services are based at WRc Medmenham unless stated otherwise.

Address:
WRc Medmenham
PO Box 16
Marlow
Buckinghamshire
SL7 2HD

Tel: 0491 571531
Fax: 0491 579094

ENVIRONMENTAL QUALITY SAMPLING AND STATISTICS

Provides specialist statistical advice on the development of sampling and monitoring programmes and the statistical interpretation of data.

The statistical ingredient is important both in the design of monitoring programmes and, subsequently, in the analysis and interpretation of sample data. Advice in support of the WRc Handbook on the Design and Interpretation of Monitoring Programmes is available to all regulatory staff.

Specialist advice is also available on the statistics of compliance monitoring and setting of standards.

NRA Officer: Dave Brewin, Severn Trent Region, Solihull

Tel: 021 711 2324 (Int: 7-22-5804)

Fax: 021 711 5824

WRc Contact Point: Julian Ellis

Cut-off: 2 days

Cost Centre: 028153 (innovation); 024100 (consultancy)

ENVIRONMENTAL TOXICOLOGY ADVISORY SERVICE

Provides Water Quality staff with both routine and emergency toxicological advice and analytical services to enable rapid responses to pollution incidents and other emergencies.

Routine enquiries must be initiated through NRA Officer at the NRA's internal centre for toxicology data.

WRc maintains an established database containing toxicological information obtained from numerous published and unpublished sources. This database covers a wide range of chemicals and WRc has experienced staff available to locate and interpret such information on a 24 hour basis. The Environmental Toxicology Advisory Service (ETAS) - see page 5 - offers advice relating to:

- toxicity of synthetic chemicals to humans, livestock and aquatic life;
- ecotoxicity, fate and behaviour of chemicals in aquatic environment;
- environmental impact assessment for the consent setting process;
- environmental impact of agricultural chemicals;
- derivation of "site specific" guidelines; and
- chemical contamination of the environment.

If necessary, arrangements can be made with WRc to provide an established service for chemical analysis with access to advanced analytical techniques essential for identifying and quantifying pollutants.

Enquirers should, if possible, have available the following information:

- the name of the substance(s) present in the water. A Chemical Abstract Services (CAS) number or a Substrate Identification Number (SIN) should be quoted wherever possible. The IUPAC name also helps staff to make a more thorough search;
- the concentration (or best estimate) of the substance(s) in water; and
- confidence in the analysis techniques used, if any. Is further confirmatory analysis required?

In addition, in an emergency, enquirers should leave a permanently manned telephone number.

The NRA has designated Regional Contacts to act as focus for regional toxicological data and experience. Refer to your Regional Contact (list to be supplied in due course) before initiating enquiry via NRA Officer at internal centre of toxicology data. Routine enquiries may be initiated via Regional Contacts if the NRA Officer is not available through absence or leave.

NRA Officer: Steve Killeen, Thames Region, Reading (internal centre)

Tel: 0734 535000 (Int: 7-25-5385)

Fax: 0734 502974

WRc Contact Point: Melanie Baker

Cut-off: 1 day

Cost Centre: 028151 (innovation); 024100 (consultancy)

ENVIRONMENTAL TOXICOLOGY

WRc ENVIRONMENTAL TOXICOLOGY ADVISORY SERVICE

Use of the "routine" and "emergency" services

Introduction

The Environmental Toxicology Advisory Service (ETAS) provides information and advice on a wide range of toxicological and ecotoxicological matters of interest to the NRA. Over the years, WRc has built up a substantial database of information which at present contains over 20,000 references on a wide range of chemicals. In addition, the database can be supplemented with on-line searches using several commercial sources.

The service aims to provide toxicological support to those involved in managing the water environment, critically assessing and interpreting data in response to specific enquiries, rather than to supply abstracts or photocopies of literature (although these are available if requested).

This enquiry service is available 24 hour a day, 7 days a week to answer both "routine" and "emergency" enquiries.

INSTAB and MTAS

ETAS covers two main areas:

INSTAB - Information service on toxicity and biodegradability

The range of subject areas covered by INSTAB is extensive and includes: protection of aquatic life in lakes, rivers, estuaries and the marine environment; problems arising from the application and disposal of agricultural chemicals; fisheries management; protection of freshwater quality; and the effects of chemicals on treatment processes.

MTAS - Mammalian toxicology advisory service

MTAS provides data relating to the effects of potentially toxic chemicals on the health of humans and livestock; and guidance on the use and disposal of industrial and agricultural chemicals.

Routine Enquiries

Routine enquiries are initiated through the NRA's internal centre (see page four for details).

Emergency Procedure

The 24 hour emergency service is designed to provide technical advice during an incident, e.g. a chemical spill. If such an emergency occurs during normal working hours (0830-1730), the enquiry may be made direct to WRc. It will be given a high priority, with an initial response usually being made within the hour. Outside these hours, enquirers should ring the Medmenham Laboratory and ask security staff for "the emergency toxicological service", where appropriate WRc staff will then be contacted. Should security staff not be available to answer your call following several attempts, the enquirer should phone the Swindon Laboratory.

Medmenham 0491 571531 Swindon 0793 511711

WASTEWATER TREATMENT PROCESSES

Provides information on the effectiveness of, and advances in, wastewater treatment processes to operational and management staff, as a technical underpinning to the review and setting of discharge consent conditions and planning of future pollution control strategies.

Initially, the service provided five base-line R&D Notes reviewing and explaining the presently available technology. Currently provides a six-monthly report and annual review of published information on advances in wastewater treatment processes.

NRA Officer: Chris Chubb, Head Office, Bristol

Tel: 0454 624400 (Int: 7-10-4314)

Fax: 0454 624409

WRc Contact Point: Paul Cooper, WRc Swindon

Cut-off: 2 days

Tel: 0793 511711

Fax: 0793 511712

Cost Centre: 028155

ANALYTICAL QUALITY CONTROL & LABORATORY METHOD DEVELOPMENT

Provides advice on Analytical Quality Control (AQC) procedures and achievement of performance targets in NRA laboratories. The WRc AQUACHECK service and related specific inter laboratory tests are used to demonstrate that NRA laboratories produce data of adequate quality for statutory and permissive monitoring requirements.

Provides advice and assistance in WRc Medmenham laboratory on development of improved analytical methods. (Any major method development must be undertaken outside this service.)

NRA Officer: Terry Long, Head Office, Bristol

Tel: 0454 624400 (Int: 7-10-4312)

Fax: 0454 624409

WRc Contact Point: Mike Gardner

Cut-off: 2 days

Cost Centre: 028158

WATER QUALITY INSTRUMENTATION

Provides support for staff involved in the monitoring of water quality. Information sources on instrumentation, samplers, data loggers, communications systems and other items relevant to automated and *in-situ* measurements of water quality are available.

An instrumentation database has been developed on disk by WRc and is available to NRA staff. This is updated every 6 months with manufacturer's information and specifications. Access to the wide-ranging expertise of WRc staff ensures a rapid response to enquiries.

NRA Officer: Terry Long, Head Office, Bristol

Tel: 0454 624400 (Int: 7-10-4312)

Fax: 0454 624409

WRc Contact Point: David Neville

Cut-off: 1 day

Cost Centre: 028154

SPECIALIST ENQUIRY SERVICE, WATER QUALITY

WRc can provide specialist scientific and technical information and support to NRA staff relating to its other acknowledged areas of expertise. These cover:

- chemical and microbiological contaminants;
- sludge and solid waste disposal and environmental effects;
- specialist issues relating to freshwater and marine ecosystems;
- environmental standards and legislation;
- short technical reviews and scoping studies; and
- ad-hoc support to working groups etc.

NRA Officer: Mervyn Bramley, Head Office, Bristol

Tel: 0454 624400 (Int: 7-10-4320)

Fax: 0454 624409

WRc Contact Point: Nick Cartwright

Cut-off: 2 days

Cost Centre: 028152

2. Institute of Hydrology

Address:

Institute of Hydrology

Maclean Building

Crowmarsh Gifford

Wallingford

Oxfordshire OX10 8BB

Tel: 0491 838800

Fax: 0491 838097

SPECIALIST ENQUIRY SERVICE, WATER RESOURCES

The Institute of Hydrology can provide specialist scientific and technical information and/or support to NRA staff relating to the following areas:

- access to a range of datasets which are appropriate to hydrological studies, including the National River Flow Archive and a variety of spatial data: rasters of land-use, soils and climate; a developing 50m grid digital terrain model (80% complete for England and Wales) and digital river networks at 1:50,000 scale; extensive historical literature sources;
- historical perspective from long-term rainfall records, drought indices, ranking of rainfall durations;
- methodology and software to enable investigations into low flow frequencies, low flow durations, storage-yield analysis at gauged and ungauged sites and use of the package Micro-LOW FLOWS;
- evaluation of the role of artificial influences in river systems and naturalising historic flow series and statistics;
- access to European river flow and catchment characteristics archive to allow wider spatial perspective to resource evaluation;
- advice on methods to assess ecologically acceptable flows;
- impacts of forestry on water yields; and
- application of soil moisture accounting models, groundwater recharge estimates under a variety of vegetative covers, estimation of evaporative and interception losses.

NRA Officer: Richard Streeter, Head Office, Bristol

Tel: 0454 624400 (Int: 7-10-4388)

Fax: 0454 624409

IH Contact Point: Martin Lees

Cut-off: 1 day

Cost Centre: 028251

3. Freshwater Biological Association

Address:

Freshwater Biological Association
The Ferry House
Ambleside
Cumbria
LA22 0LP

Tel: 05394 42468

Fax: 05394 46914

For attention: Head of Library and Information Services

FRESHWATER BIOLOGY

The FBA can provide specialist scientific information and support to NRA staff in the areas of:

- freshwater algology;
- invertebrate zoology;
- macrophyte ecology; and
- fish ecology.

This support is provided through the following services:

Literature Search Service

The Literature Search Service is intended to enable NRA staff to identify papers within the FBA library's holdings in the scientific areas covered by the Technical Services. The staff of the FBA Library and Information Service are on hand to carry out information searches. In the first instance, the principal source of information will be FBA library's detailed catalogues and indexes, although the option to use international on-line databases and commercial printed information sources is also available.

The FBA will supply a printed bibliography of references matching your requirements, and the Documentation Delivery Service will be able to help in supplying copies of papers from the FBA library.

Document Delivery Service

You can request photocopies of any article from the extensive FBA library holdings identified in the Literature Search. Examples include articles from journals, conference proceedings and chapters from books (but only up to 10% of any one monograph). The library holdings include all articles listed in the FBA's Current Awareness Service and the list of IFE and FBA staff papers in Freshwater Forum. (This service is charged at a rate of £3 per article.) An example of the FBA Document Delivery Form is provided on page 13. The original is available from Mike Eastwell.

NRA Officer: Mike Eastwell, Head Office Information Centre

Tel: 0454 624400

(Int: 7-10-3042)

Cut-off: 4 hours

Fax: 0454 624409

Information Service

The combined expertise of both FBA and the adjacent Institute of Freshwater Ecology is available to deal with enquiries on such matters as:

- where particular information may be found;
- whom to contact with regard to a particular problem or issue;
- what are the key references on a particular subject;
- specific items of information on particular water bodies or organisms;
- regional distribution of organisms (where this information exists). Some of this information may also be found in the British List of Hydrobiological Papers;
- advice on sampling methods for freshwater bacteria, algae, macrophytes and invertebrates; and
- statistical advice for biological sampling.

Identification Service

Correct identification of a particular aquatic plant or animal may require considerable knowledge and expertise in the use of keys and identification systems. This service supports the identification of the following freshwater organisms:

- fish;
- macrophytes;
- invertebrates; and
- algae.

In the first instance, please telephone to obtain guidance on the correct preservation and packaging of the specimens.

Identification services for protozoa, fungi and actinomycetes, heterotrophic bacteria (API systems), and morphologically distinct but unculturable bacteria, are also available through FBA but are not covered by these Technical Services.

NRA Officers: Paul Raven, Head Office

Roger Sweeting, Thames

Tel: 0454 624400
(Int: 7-10-4343)

Tel: 0734 535000
(Int: 7-25-5405)

Fax: 0454 624409

Fax: 0734 500388

FBA Contact Point: Ian Pettman
(all services)

Cut-off: 1 day

Cost Centre: 028156
(all services)

FBA DOCUMENT DELIVERY FORM

FRESHWATER BIOLOGICAL ASSOCIATION Please return the white and yellow copies to: LIBRARY AND INFORMATION SERVICE, FERRY HOUSE, FAR SAWREY, AMBLESIDE, CUMBRIA, LA22 0LP Tel: (05394) 42468 Fax: (05394) 46914 <div style="text-align: right;">(Please Print)</div>	NAME: ADDRESS:
Author(s) of article: Title of article: Journal/Book Title: <div style="display: flex; justify-content: space-between;"> Year: Volume no: Part no: Page nos: FBA shelf no: </div> Source of Reference: Current Awareness Service No. (if known):	
<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> I declare that this publication is required for purposes of research or private study and that I have not previously been supplied with a copy, nor do I know of any of the people with whom I work or study making or intending to make a request for substantially the same material. Signature: _____ Date: _____ </div> <div style="width: 35%; border: 1px solid black; padding: 5px;"> FOR OFFICE USE ONLY <div style="display: flex; justify-content: space-between; border-bottom: 1px solid black;"> LOAN NO: SENT: </div> ACTION: </div> </div>	

(NB - a second form will be required for articles over 20 pages in length)

NOTE: The original form is available from Mike Eastwell, Head Office Information Centre.

4. Aquatic Weeds Research Unit

Address:

Aquatic Weeds Research Unit

Broadmoor Lane

Sonning-on-Thames

Reading

RG4 0TH

Tel: 0734 690072

Fax: 0734 441730

CONTROL OF AQUATIC AND BANKSIDE WEEDS

The AWRU can provide information on the control of aquatic and bankside weeds and algae, as well as related aspects of water management. Specific areas of expertise include:

- biological efficacy of mechanical control techniques;
- use of herbicides in or near water;
- biological control techniques;
- environmental control techniques;
- identification of nuisance aquatic vegetation and the selection of appropriate control methods; and
- assessment of environmental risks and benefits resulting from weed control operations.

Through its contacts in other research organisations and in industry, the AWRU can also provide information on other related sources of advice.

NRA Officer: John Fitzsimons, Severn Trent Region, Solihull

Tel: 021 711 2324 (Int: 7-22-5810)

Fax: 021 711 5824

AWRU Contact Point: Pip Barrett

Cut-off: 1 day

Cost Centre: 028159

INSTRUCTIONS ON USE OF TECHNICAL SERVICES

General principles

The NRA seeks to ensure that Technical Services are easy to use, consistent with the need to maintain accountability for use and a clear audit trail. Therefore, for each service rendered, a Requisition must be completed and registered as a basis for authorization of use and subsequent payment. (Requisition forms - example on page 21 - are available from Regional R&D Coordinators.)

In initiating any request, the NRA user and the Contact Point for the national centre concerned must ensure the following actions are taken:

- the technical requirements are specified so as to ensure that only the minimum necessary resources are utilised; and
- a Requisition (form as page 18) is completed and registered.

The above must be done jointly by the NRA user and the national centre's Contact Point. Details of these actions for different levels of expenditure and for routine or emergency services are outlined below. In all cases, the NRA user must check that responsibility for completing the Requisition is understood.

Actions by NRA staff member

Initiation of enquiry

1. NRA staff member in Region or Head Office decides he/she needs to use a Technical Service, having taken reasonable steps to ensure that the information needed is not accessible within the NRA. Staff member contacts, preferably by phone, the named national centre Contact Point for the Technical Service concerned. If appropriate, staff member faxes any relevant papers which will help the national centre to assess the enquiry and the work to be done. (Note all enquiries on Environmental Toxicology are routed through the internal NRA centre).
2. NRA staff member discusses technical details and, where appropriate, cost, timescale and form of response with the Contact Point or other delegated officer and obtains estimate of inputs and timescale. The enquiry may fall into one of the following categories:
 - (a) **Brief Enquiry** (Less than 2 hours resource input; overall cost not exceeding £200). No signed Requisition necessary from NRA. Information passed to NRA staff member in agreed manner.
 - (b) **Normal Enquiry** (Less than Cut-off resource input stated in Technical Services section; overall cost not exceeding £1000). Requisition completed between NRA staff member and Contact Point, and signed by NRA staff member. Original sent (or faxed) to national centre Contact Point to requisition services. NRA staff member sends copy to NRA Officer for service concerned for record.
 - (c) **Substantial Enquiry** (More than stated Cut-off resource input, or overall cost exceeding £1000). Draft Requisition completed between NRA staff member and Contact Point. NRA staff member faxes draft to NRA Officer for authorization. NRA Officer may amend the enquiry in authorising it. NRA Officer faxes authorization back to NRA staff member who proceeds to requisition services as in (b) above (including sending final copy back to NRA Officer).

Extensions

3. In the event of likely overspend by national centre (see Actions by national centre responding to NRA enquiry item 5, below), original requisition must be extended with any necessary further actions, as in 2 preceding, based on new estimated resources/costs.

Receipt of response

4. If, on receipt of response by national centre, the technical information and the record of resources/costs are satisfactory, no further formal action is needed. In event of either being unsatisfactory, take up issue directly with national centre's Contact Point, and advise NRA Officer if satisfactory outcome not achieved.

Emergencies

5. In emergencies, instruct national centre's Contact Point to proceed on basis of verbal instruction and an agreed brief for immediate future. Confirm overall scope of services by subsequent exchange of details as in 2(b) or (c) preceding.

Actions by national centre responding to NRA enquiry

Initiation of enquiry

1. Obtain best practicable brief from NRA staff member - request additional data by fax or mail if appropriate.
2. Provide estimate of resource input and overall cost to NRA staff member appropriate format for Requisition. Categorise as:
 - **Brief Enquiry** Less than 2 hours resource input, and overall cost not exceeding £200.
 - **Normal Enquiry** Less than stated Cut-off (see Technical Services section) of resource input, and overall cost not exceeding £1000.
 - **Substantial Enquiry** Resource input over stated Cut-off, or cost exceeding £1000.
3. Ensure that technical details, timescale, form of response and cost are clearly understood. For services in Environmental Quality Sampling and Statistics or Environmental Toxicology, confirm whether service is, (a) innovative or (b) consultancy category. Initiate service on receipt of verbal instructions for Brief Enquiry or Emergency (see 4 below) or signed requisition for Normal Enquiry or Substantial Enquiry (needs NRA staff member signature for Normal Enquiry; NRA staff member plus NRA Officer for Substantial Enquiry).

Undertaking enquiry

4. Undertake enquiry in accordance with agreed Requisition. For Brief Enquiry, national centre produces own retrospective Requisition, by recording Details of Enquiry, Actual Resource Input and NRA Origination details on a Requisition form.

Extensions

5. If resources/costs likely to exceed those on initial Requisition by more than 25% or £200, whichever is the least, for Brief Enquiry or Normal Enquiry, or 5% or £200, whichever is the least, respectively for Substantial Enquiry, then the NRA staff member must be informed immediately and an extension endorsed on the original Requisition.

Submission of response

6. Submit response to NRA staff member in accordance with Requisition. Enclose record of resources/costs to be invoiced (see Item 8). Note that for some services (e.g. Environmental Toxicology) a copy must also be submitted to NRA Officer.
7. Inform NRA Officer if any results, in the opinion of the national centre, warrant wider dissemination or discussion.

Records and invoicing

8. Maintain account register of actual costs of each service rendered alongside Requisitions. Invoice quarterly to R&D Section, NRA Head Office with separate invoice for each Cost Centre and list of enquiries (name Region of NRA staff member, date of requisition, subject, cost).

Emergency response

9. In emergencies, proceed on basis of verbal instruction having agreed extent of services to be provided in immediate future. Confirm overall scope of services by subsequent exchange of details as in 3 and 4 preceding.

Requisition for Technical Services to NRA

Topic of Service.....

Organisation providing service.....

1. Details of enquiry (include or attach necessary technical details and describe form of response)

Timescale for response: Immediate/within days (delete/fill in as appropriate)

2. Justification of enquiry (Describe NRA duty/task for which information is needed)

3. Estimate of Organisation's proposed input (Description of services to be provided)

Total estimated cost: £.....

Estimated resources:man days

To be provided by: (name)

4. Notes (e.g. amendments following authorization; requests for circulation of extra copies of results)

NRA origination

Enquiry by:

Name:

Position:

Location:

NRA cost centre code:

Authorised by:

Name:

Position:

Location:

Date:

Signed.....

Date:

Signed.....

Tel no:

Tel no:

Fax no:

Fax no:

For use by Organisation providing service

Enquiry received/estimate produced by:

Requisition received by.....

Date: