

A CIWEM West Midlands conference



The EU Water Framework Directive Fundamentals and Key Challenges

7 December 2005

The Think Tank at Millennium Point,
Curzon St, Birmingham

Sponsors:

Entec



Consulting

Supported by the Foundation for Water Research
Water Framework Directive Information Centre



This event is accredited for Continuing Professional Development by CIWEM

About CIWEM

The Chartered Institution of Water and Environmental Management (CIWEM) is the leading professional and qualifying body for engineers, scientists and other professionals, students and others committed to the sustainable management and development of water and the environment.

The Water Framework Directive

The Water Framework Directive will define how the water environment is managed in the foreseeable future. Management of land will also be affected where it affects the water environment.

At the heart of the Directive is the requirement to set environmental objectives for all water bodies. They must be set by December 2009, nine years on from when the Directive was adopted. For the first time, objectives will be set in a comprehensive manner – for all waters, and taking into account all impacts, not just pollution. The aim of the Directive is to achieve sustainable water management, so the objectives must take into account the needs of society and the economy as well as the needs of the environment.

Aims and Objectives of the Conference

The conference will provide an opportunity for you to be briefed by people directly involved in the implementation process. It will be relevant to all those involved in managing the water environment or in activities having an impact on it.

The first part of the conference deals with the implementation process, with presentations on river basin characterisation and progress towards River Basin Management Plans, and on the development of classification schemes that can be used for setting environmental objectives.

The second part deals with the key challenges for England and Wales posed by the Directive: hydromorphology, diffuse pollution, and the issues of sustainability, cost, and public participation. Hydromorphological and diffuse pollution pressures have never been assessed and regulated in a comprehensive way, and there will be presentations on how these are to be dealt with. Hydromorphological pressures are non-pollution pressures that act on the physical environment of water bodies, and are of particular relevance to flood defence, navigation, and development planning activities. Diffuse pollution pressures are principally from agriculture, but also from other sources such as urban drainage.

This event will provide CIWEM members with **4 hours** of Continuing Professional Development. Non-members are also welcome to attend.

Presentations

After the conference we plan to mount the presentations on the conferences section of the CMS website (www.coastms.co.uk), with a link from FWR's WFD website (www.euwfd.com).

Programme

13:00 Registration

13:30 Introduction and welcome

Andy Eadon, Chairman, CIWEM West Midlands Branch

Session 1: The Fundamentals

13:40 **Policy and legal background**

Evolution of EU water environment directives. Transposition of the Directive into English and Welsh law.

Grahame Newman, Programme Manager, WFD, British Waterways

13:50 **The implementation process in England and Wales**

River basin characterisation, monitoring, river basin management plans

Dave Martin, WFD Policy Manager, Environment Agency

14:15 **Development of environmental classification schemes**

Ecological classification (typology, reference conditions, classification, inter-calibration, classification for artificial and heavily modified waters). Chemical and quantitative classification (via Daughter Directives).

Richard Hemsworth, EMCAR Project Manager, Environment Agency

14:40 Discussion

15:00 Break

Session 2: The Key Challenges

15:20 **Diffuse pollution. Defra's strategies for agricultural and non-agricultural diffuse pollution.**

Russell Todd, Policy Advisor, Catchment Sensitive Farming Team, DEFRA

15:40 **Hydromorphology. The Environment Agency's Hydromorphology project.**

Flood defence, navigation, abstraction and other non-pollution pressures on the water environment.

Jane Rawson, Flood Risk Management Policy Coordinator, Environment Agency

16:00 **Can we afford it? Sustainability, economics and public participation.**

Bob Breach, Consultant, Water Quality and Environmental Consultancy

16:20 Questions

16.40 Summing up

16:45 Close

THE EU WATER FRAMEWORK DIRECTIVE: POLICY AND LEGAL BACKGROUND

Grahame Newman, Programme Manager, Water Framework Directive, British Waterways

Environmental policy has been one of the success stories of the European Union. Since 1973 its policies have been set out through a series of Environmental Action Programmes (EAPs).

The first two EAPs focussed on addressing serious pollution through a series of Directives in the 1970s that set Environmental Quality Standards (EQSs) for certain water bodies. These were of two types:-

- waters used for specific purposes - potable abstraction, freshwater fisheries, shell fisheries, bathing (Surface Water Abstraction Directive, Freshwater Fish Directive, Shellfish Waters Directive, Bathing Waters Directive),
- waters receiving discharges of specific persistent and harmful chemicals (Dangerous Substances Directive, Groundwater Directive).

In the 1980s and early 90s we saw Directives applying standards to particular sectors such as farming (Nitrates Directive) and sewage treatment (Urban Wastewater Treatment Directive). We also saw Directives on wildlife protection, which required, the setting of specific water quality standards for discharges affecting designated sites (Birds and Habitats Directives).

In the early 90s it was recognised that standards for receiving waters were needed that were ecologically based. An early draft of a so called Ecological Water Quality Directive was drafted, but it soon became apparent that this would simply add to the increasingly chaotic and confusing array of water quality Directives. It was therefore decided to pursue a Directive that not only incorporated ecological standards, but also integrated existing EC legislation. And so the Water Framework Directive (WFD) was born, being adopted in Dec 2000. Most of the earlier water quality directives will be repealed, except for those on Bathing Waters, Urban Wastewater and Nitrates.

The WFD was been transposed into English and Welsh law by The Water Framework Directive (England & Wales) Regulations 2003. This designates the EA as competent authority, and confers a range of duties on it leading to the production of River Basin Management Plans. These Plans will set out the environmental objective of each water body, and the measures to be applied to achieve them. It also requires all public bodies to have regard to the Plans in the carrying out of their statutory duties.

The government recently set out its priorities for water policy in England (Directing the Flow, Defra, 2002). It recognised that substantial improvements in water quality had been achieved in recent years, but there were still key issues to address, including water resources and diffuse pollution. The general approach would be to follow the principles of sustainable development, and to ensure “joined up government” through better policy integration. The document concludes that “*implementation of WFD will provide the most important single means of taking forward the aims of this document*”.

Further information can be obtained from...

- Defra: <http://www.defra.gov.uk/environment/water/wfd/index.htm>
- Environment Agency: <http://www.environment-agency.gov.uk/wfd>
- EU: http://europa.eu.int/comm/environment/water/water-framework/index_en.html
- The Foundation for Water Research’s WFD Information Centre: <http://www.euwfd.com/>

RIVER BASIN MANAGEMENT

Dave Martin, WFD Policy Manager, Environment Agency

Under the Water Framework Directive (WFD), the purpose of River Basin Management is to ensure the protection and improvement of the water environment using an integrated approach. To achieve this, the Directive sets out specific environmental objectives and a system for agreeing alternative objectives.

The Directive also introduces a process of 6-yearly management cycles. A key stage within each cycle is compiling River Basin Management Plans for each of the River Basin District.

Each River Basin Management cycle can be divided into six key stages, consistent with key outputs of the WFD. For the first cycle these are:

- stage 1 – statutory public consultation River Basin District work plans by end 2006;
- stage 2 – statutory public consultation Summary of Significant Water management Issues by end 2007;
- stage 3 – statutory public consultation on River Basin Management Plans (including Water Body Objectives and Programmes of Measures) by end 2008;
- stage 4 – agreement of River Basin Management Plans, signed off by the Secretary of State (in England) and/or Welsh Assembly Government (in Wales), by end 2009;
- stage 5 – Programmes of Measures fully implemented by end 2012;
- stage 6 – first cycle of River Basin Management completed by end 2015.

The presentation will give an overview of the River Basin Management cycle and show how stakeholders will be able to contribute towards process.

CLASSIFICATION AND ENVIRONMENTAL STANDARDS IN THE WATER FRAMEWORK DIRECTIVE

Richard Hemsworth, EMCAR Project Manager, Environment Agency

The Water Framework Directive (WFD) asks us to classify waters in a different way, using new and revised environmental standards to assess whether environmental conditions are good enough to support biology.

What is classification?

We use classification systems to assess the state of the environment at any point in time. They show us where the environment is of good quality and where it may require improvement. Classification systems therefore help us in planning what measures might be required for improvements and will eventually show how our actions have benefited the environment.

Regulatory agencies in the UK already use classification systems such as the General Quality Assessment (GQA) scheme. The GQA has been a very useful tool for measuring the quality of our rivers and showing how river quality has improved as a result of investment. However, we now need to create a more detailed picture of the water environment.

Our assessments so far have concentrated mainly on a small number of chemical and biological indicators, but we must now look at the water environment as a whole. This is because the WFD changes the way in which we assess status. We are developing new classification systems for rivers, lakes, estuaries, coastal waters and groundwaters. The health of the animal and plant groups that live in surface waters will now be the main factor that describes the state of those waters. The new systems will help to provide a safer, cleaner and richer water environment.

Setting environmental objectives

In each River Basin Planning cycle, we will define objectives for each water body using the classification systems, considering social, environmental and economic factors. We will express these objectives in terms of status; for example the objective may be to 'achieve good status'. The objectives will define the status we want the water body to achieve and by what time, and are set as part of the River Basin Planning process.

The WFD also allows us to set alternative objectives where we think we may not be able to achieve good status or it will be disproportionately expensive to do so¹. We will need to justify any alternative objectives on the basis of a full socio-economic and feasibility assessment. Methods for assessing alternative objectives on the basis of economic grounds are being developed in a Collaborative Research Programme².

1 The circumstances under which alternative objectives will be used is outlined in UKTAG guidance paper 13c – Draft principles for an objective setting framework for river basin management planning in accordance with the Water Framework Directive'

2 For further details see www.defra.gov.uk/environment/water/wfd/economics/research.htm

DIFFUSE POLLUTION. DEFRA'S STRATEGIES FOR AGRICULTURAL AND NON-AGRICULTURAL DIFFUSE POLLUTION.

Russell Todd, Policy Advisor, Catchment Sensitive Farming Team, DEFRA

Diffuse water pollution is a significant contributor to the long-term degradation of UK rivers, lakes and groundwaters. Within the EC, the key driver for tackling diffuse pollution is the Water Framework Directive (WFD).

The presentation will outline the approaches being taken by Defra to meet the challenging targets set by WFD:

- Catchment Sensitive Farming (CSF) and;
- Non-Agricultural Diffuse Pollution (Non-Ag).

Clearly the challenge is to identify appropriate and the most cost-effective measures for tackling the impact of Non-Ag sources and farming on the environment while ensuring, the long term sustainability of said industries.

There are already policies in place that will help tackle diffuse pollution, for example the EC Nitrates Directive, Environmental Stewardship Schemes under CAP, etc as well as various advice initiatives for farmers. Many of you will also be aware of the launch next year of the CSF Delivery Project, which I will expand on, but not so aware of the work going on to tackle Non-Ag sources of diffuse pollution, which again I will expand on in the presentation.

THE ENVIRONMENT AGENCY APPROACH TO HYDROMORPHOLOGY

Jane Rawson, Flood Risk Management Policy Coordinator, Environment Agency

Hydromorphological pressure is one of the most significant facing England and Wales. This is a common theme across many Member States, highlighted by Article 5 reports completed for March 2005.

We face significant challenge in developing new policies and processes, new areas of scientific understanding and new regulatory powers to ensure we deal with this in a way that will deliver environmental improvement. As well as challenging us, the directive also provides opportunity to improve an integrated approach in historically separate water and land management areas.

We need to develop and understand:

- How Hydromorphological change effects the ecological condition of a water body
- How to address areas of hydromorphological pressure where there are no current controls or powers to assist mitigation
- How to monitor complex hydromorphological impacts and the success of mitigation measures
- How to deal with the wide variation of management response that will be required for lakes, estuaries, and coastal and river water bodies
- How existing mitigation measures within the Environment Agency and elsewhere may help deliver WFD Hydromorphological requirements
- How new measures could help address gaps
- How to designate water bodies as artificial or heavily modified
- How to address stakeholder concerns and how to work with others to help deliver the directive.

Considering the complexity and large scope of issues that relate to the hydromorphological pressure and it's management. The Environment Agency has developed a project to co-ordinate the development of work to completion and act as a focus for stakeholder and interested parties.

Websites

- Environment Agency WFD pages: <http://www.environment-agency.gov.uk/business/444217/444663/955573/?version=1&lang=e>
- UKTAG: <http://www.wfduk.org/>
- Sniffer: http://www.sniffer.org.uk/sniffer_overview.asp

Contact Details

jane.rawson@environment-agency.gov.uk

01733 464411

CAN WE AFFORD IT? SUSTAINABILITY, ECONOMICS AND PUBLIC PARTICIPATION.

Bob Breach, Independent water quality and environmental consultant

The Water Framework Directive is a different type of Directive from those that have previously emerged from Brussels. It is of course primarily concerned with maintaining and where necessary improving the quality of all water bodies, but it takes an integrated approach which allows considerable flexibility to Member States in how they meet its objectives. Crucially however the Directive also requires the use of economic assessment tools and the active involvement of the public. In effect it therefore provides a framework for the future sustainable management of water resources which requires that a correct balance is taken between environmental, economic and social issues.

So far those responsible for the Directive in the UK have put a huge amount of effort into making sure its initial statutory requirements are met and developing technical guidance on how it will be implemented. However an enormous amount of work still remains if the Directive timetable is to be met and for it to become a truly effective vehicle for the future sustainable management of water resources.

The Directive is now entering a crucial phase where the initial planning has to be made fully operational and rolled out to a much wider audience. This can only effectively occur if this process actively involves all the key stakeholders, particularly those business sectors that will inevitably have to invest heavily if its objectives are to be met.

The paper will therefore briefly address a number of issues around this theme focussing on the following topics

- Making the Directive operational
- Practical economics
- Actively involving the public: creating the compelling case
- New problems: new solutions

Delegate List sorted by surname

<u>Name</u>	<u>Organisation</u>
Jon Allen	Watstech Ltd
Simon Atkinson	The Wildlife Trust for Birmingham and the Black Country
Richard Austen	Environment Agency
Graham Bailey	British Waterways
Ian Bakewell	Mouchel Parkman
Vicky Barnard	BWB Consulting
Shelly Beckett	Environment Agency
Thomas Bell	Marine Conservation Society
James Bentley	OFWAT
Ancel Boucher	Severn Trent Water
Kevin Bowen	Severn Trent Water
Susan Bowen	Environment Agency
Helen Boyle	Severn Trent Water
Keith Boyle	Environment Agency
Bob Breach	Water Quality and Environmental Consultancy
Richard Breakspear	Entec
D.M.Broadbent	Coventry University
Lisa Brookes	Severn Trent Water
E. Bullivant	Waterman
John Churchley	Severn Trent Water
Giordano Colarullo	OFWAT
Kevin Coleman	Environment Agency
Alison Court	Severn Trent Water
Dr. H.E Crabtree	PReauCESS
Laura Dawson	Environment Agency
Andrea Deeming	OFWAT
Phil Dyke	Severn Trent Water
Andy Eadon	Severn Trent Water
Kevin East	British Canoe Union
Jennifer Essex	Capita Symonds
Louise Evans	Environment Agency
Tony Fernandez	Severn Trent Water
Lee Finney	Severn Trent Water
Dr Ian Fletcher	Entec
Georgi Georgiev	Severn Trent Water International
Ian Gray	Severn Trent Water
Nicole Grieves	Environment Agency
Frank Grimshaw	Severn Trent Water
Amanda Hampton	Environment Agency
Caren Hands	Environment Agency
Dr Phil Harding	Environment Agency
Geoff Harper	Environment Agency
Richard Hemsworth	Environment Agency
Roger Herrington	British Waterways
Phil Hulme	Environment Agency
Kate Hurst	Environment Agency
Mick Hyde	Environment Agency

Robert Jolliffe	Severn Trent Water
Ciaran Kelly	Severn Trent Water International
John Kelly	Environment Agency
Clare Le Brecht	Jacobs Babtie
Emma Leacroft	White Young Green Environmental
Claire Lindfield	United Utilities NW
Dave Lowe	Environment Agency
Joanna Lupton	United Utilities NW
Nicola Marshall	Arup
John Martin	Severn Trent Water
Dave Martin	Environment Agency
Rob Matthews	Environment Agency
Andrew Mitchell	Environment Agency
Hannah Morgan	Environment Agency
Louise Morley	JMP Consultants
Tracy Myers	Severn Trent Water
Stuart Nelmes	BWB Consulting
Grahame Newman	British Waterways
Kath Oldring	Severn Trent Water
Sharon Palmer	Environment Agency
Neil Parsons	Severn Trent Water
Dave Peabody	Environment Agency
Will Pegg	Environment Agency
Geoff Powell	Severn Trent Water
Helen Proffitt	British Waterways
Iqbal Rassool	BWB Consulting
John Ravening	Arup
Jane Rawson	Environment Agency
Mark Reid	Environment Agency
Lesley Rippon	Environment Agency
Tim Robins	Severn Trent Water
Emily Sandercock	Severn Trent Water
Steve Shaw	Environment Agency
Ellie Simpson	Environment Agency
Russell Smith	Ewan Group plc
Chris Stocks	Ashact Hyder
Les Stokes	Severn Trent Water
Amy Sullivan	National Farmers Union
Louise Sutherland	Warwickshire Wildlife Trust
Russell Todd	Defra
Dean Tomlinson	WS Atkins
James Trafford	Environment Agency
Tracy Tyrell	United Utilities NW
Lee Upton	Severn Trent Water
Pete Vale	Severn Trent Water
Alison Williams	Environment Agency
Mark Williams	Environment Agency

Delagate list sorted by organisation

<u>Name</u>	<u>Organisation</u>
Nicola Marshall	Arup
John Ravening	Arup
Chris Stocks	Ashact Hyder
Kevin East	British Canoe Union
Graham Bailey	British Waterways
Roger Herrington	British Waterways
Grahame Newman	British Waterways
Helen Proffitt	British Waterways
Vicky Barnard	BWB Consulting
Stuart Nelmes	BWB Consulting
Iqbal Rassool	BWB Consulting
Jennifer Essex	Capita Symonds
D.M.Broadbent	Coventry University
Russell Todd	Defra
Richard Breakspear	Entec
Dr Ian Fletcher	Entec
Richard Austen	Environment Agency
Shelly Beckett	Environment Agency
Susan Bowen	Environment Agency
Keith Boyle	Environment Agency
Kevin Coleman	Environment Agency
Laura Dawson	Environment Agency
Louise Evans	Environment Agency
Nicole Grieves	Environment Agency
Amanda Hampton	Environment Agency
Caren Hands	Environment Agency
Dr Phil Harding	Environment Agency
Geoff Harper	Environment Agency
Richard Hemsworth	Environment Agency
Phil Hulme	Environment Agency
Kate Hurst	Environment Agency
Mick Hyde	Environment Agency
John Kelly	Environment Agency
Dave Lowe	Environment Agency
Dave Martin	Environment Agency
Rob Matthews	Environment Agency
Andrew Mitchell	Environment Agency
Hannah Morgan	Environment Agency
Sharon Palmer	Environment Agency
Dave Peabody	Environment Agency
Will Pegg	Environment Agency
Jane Rawson	Environment Agency
Mark Reid	Environment Agency
Lesley Rippon	Environment Agency
Steve Shaw	Environment Agency
Ellie Simpson	Environment Agency

James Trafford	Environment Agency
Alison Williams	Environment Agency
Mark Williams	Environment Agency
Russell Smith	Ewan Group plc
Clare Le Brecht	Jacobs Babtie
Louise Morley	JMP Consultants
Thomas Bell	Marine Conservation Society
Ian Bakewell	Mouchel Parkman
Amy Sullivan	National Farmers Union
James Bentley	OFWAT
Giordano Colarullo	OFWAT
Andrea Deeming	OFWAT
Dr. H.E Crabtree	PReauCESS
Ancel Boucher	Severn Trent Water
Kevin Bowen	Severn Trent Water
Helen Boyle	Severn Trent Water
Lisa Brookes	Severn Trent Water
John Churchley	Severn Trent Water
Alison Court	Severn Trent Water
Phil Dyke	Severn Trent Water
Andy Eadon	Severn Trent Water
Tony Fernandez	Severn Trent Water
Lee Finney	Severn Trent Water
Ian Gray	Severn Trent Water
Frank Grimshaw	Severn Trent Water
Robert Jolliffe	Severn Trent Water
John Martin	Severn Trent Water
Tracy Myers	Severn Trent Water
Kath Oldring	Severn Trent Water
Neil Parsons	Severn Trent Water
Geoff Powell	Severn Trent Water
Tim Robins	Severn Trent Water
Emily Sandercock	Severn Trent Water
Les Stokes	Severn Trent Water
Lee Upton	Severn Trent Water
Pete Vale	Severn Trent Water
Georgi Georgiev	Severn Trent Water International
Ciaran Kelly	Severn Trent Water International
Simon Atkinson	The Wildlife Trust for Birmingham and the Black Country
Claire Lindfield	United Utilities NW
Joanna Lupton	United Utilities NW
Tracy Tyrell	United Utilities NW
Louise Sutherland	Warwickshire Wildlife Trust
Bob Breach	Water Quality and Environmental Consultancy
E. Bullivant	Waterman
Jon Allen	Watstech Ltd
Emma Leacroft	White Young Green Environmental
Dean Tomlinson	WS Atkins