

enhancing... improving... cleaning... restoring...
changing... tackling... protecting... reducing...
create a better place... influencing... inspiring...
advising... managing... adapting...

North Devon WFD Management Area Abstraction Licensing Strategy

(Including the Taw and North Devon, and Torridge and Hartland Streams
CAMS)

A licensing strategy to manage water resources sustainably

22nd December 2012

We are the Environment Agency. It's our job to look after your environment and make it **a better place** - for you, and for future generations.

Your environment is the air you breathe, the water you drink and the ground you walk on. Working with business, Government and society as a whole, we are making your environment cleaner and healthier.

The Environment Agency. Out there, making your environment a better place.

Published by:

Environment Agency
Horizon House
Deanery Road
Bristol BS1 5AH
Tel: 03708 506 506
Email: enquiries@environment-agency.gov.uk
www.environment-agency.gov.uk

© Environment Agency

All rights reserved. This document may be reproduced with prior permission of the Environment Agency.

Foreword

Water is the most essential of our natural resources, and it is our job to ensure that we manage and use it effectively and sustainably. The latest climate change predictions show that pressure on water resources is likely to increase in the future. In light of this, we have to ensure that we continue to maintain and improve sustainable abstraction and balance the needs of society, the economy and the environment. We use Catchment Abstraction Management Strategies (CAMS) to help us manage this vital resource.

This licensing strategy sets out how we will manage water resources in the area and provides you with information on how we will manage existing abstraction licences and water availability for further abstraction.

In the South West region, we have decided to align our abstraction licensing strategies with Water Framework Directive (WFD) management Areas. These are often larger than individual CAMS areas, and by doing this we are creating fewer strategies and avoiding duplication.



Mark Rice

Environment Planning & Engagement Manager

Contents

| | |
|--|-----------|
| 1. ABOUT THE LICENSING STRATEGY | 4 |
| 2. NORTH DEVON WFD MANAGEMENT AREA..... | 5 |
| Map 1. North Devon WFD Management Area..... | 6 |
| 3. WATER RESOURCE AVAILABILITY OF THE NORTH DEVON WFD MANAGEMENT AREA | 7 |
| Table 1. Implications of water resource availability colours. | 8 |
| Map 2. Resource colours at Q30 | 9 |
| Map 3. Resource colours at Q50 | 10 |
| Map 4. Resource colours at Q70 | 11 |
| Map 5. Resource colours at Q95 | 12 |
| Table 2. Percentage reliability of consumptive abstraction. | 13 |
| Map 6. Water resource reliability expressed as percentage of time available. | 14 |
| 4. HOW WE MANAGE ABSTRACTIONS IN THE NORTH DEVON WFD MANAGEMENT AREA | 15 |
| Table 3a. HOFs for the assessment points of Taw and North Devon CAMS as at 1 May 2012.. | 18 |
| Table 3b. HOFs for the assessment points of Torridge and Hartland Streams CAMS as at 1 May 2012. | 19 |
| Map 7. Heavily Modified and Artificial Water Bodies. | 20 |
| Table 4. CAMS approach to trading | 22 |
| Map 8. Designated Sites..... | 24 |
| GLOSSARY OF TERMS | 26 |
| LIST OF ABBREVIATIONS | 27 |

1. About the Licensing Strategy

This **Licensing Strategy** sets out how water resources are managed in the North Devon WFD Management Area. It provides information about where water is available for further abstraction and an indication of how reliable a new abstraction licence may be.

This strategy was produced in December 2012 and it supersedes the strategy for Torridge & Hartland Streams, issued in October 2007 and Taw & North Devon Streams issued in January 2006

How CAMS contributes to achieving environmental objectives under the (WFD) Water Framework Directive

The Water Framework Directive's main objectives are to protect and enhance the water environment and ensure the sustainable use of water resources for economic and social development.

Catchment Abstraction Management Strategies (CAMS) set out how we will manage the water resources of a catchment and contribute to implementing the WFD.

CAMS contribute to the WFD by:

- Providing a water resource assessment of rivers, lakes, reservoirs, estuaries and groundwater referred to as water bodies under the WFD;
- Identifying water bodies that fail flow conditions expected to support good ecological status;
- Preventing deterioration of water body status due to new abstractions;
- Providing results which inform River Basin Management Plans (RBMPs).

When is an abstraction licence required?

You need a licence from us if you want to abstract more than 20 cubic metres (4,400 gallons) of water per day from a:

- river or stream
- reservoir, lake or pond
- canal
- spring or
- an underground source

Whether or not a licence is granted depends on the amount of water available after the needs of the environment and existing abstractors are met and whether the justification for the abstraction is reasonable.

Sustainable abstraction

This licensing strategy has been produced using evidence and information gathered during the Catchment Abstraction Management Strategy (CAMS) process. Through this process we consider the impact of abstraction at all flows. This helps to manage future abstraction more sustainably.

We now assess water resources at a sub-catchment level called water bodies. This means that we can provide more detailed information on the availability of water resources in the Torridge and Hartland Streams CAMS area and the Taw and North Devon Streams CAMS area compared to the scale used in the previous strategies. Within this strategy we also outline where we may need to reduce current rates of abstraction and our approach on time limiting licences.

The background, aims and principles of CAMS, the over arching principles we use when managing abstraction licences and links with other initiatives are detailed in our document: [Managing Water Abstraction](#). You should read Managing Water Abstraction when reading this catchment specific licensing strategy.

2. North Devon WFD Management Area

This is an overview of the North Devon WFD Management Area which includes both the Taw and North Devon Streams CAMS and Torridge & Hartland Streams CAMS.

The Taw and North Devon Streams CAMS contains an area of approximately 1437 km² stretching from the headwaters of the River Taw on Dartmoor north to the coast at Lynton. The area is largely rural and contains parts of the Dartmoor and Exmoor National Parks as well as a section of the North Devon Area of Outstanding Natural Beauty.

The River Taw drains to the Taw Estuary, as does the Barnstaple Yeo, the Caen and Bradford Water. The Taw has several tributaries, amongst the largest of which are the Bray, The Mole, the Dacha and the Lapford Yeo. The catchment also contains the Haddon and the East and West Lyn which flow to the north coast.

Urban areas within the catchment include Barnstaple and Braunton in the northwest and Ilfracombe and Lynton on the north coast, further south are the towns of South Molton, Witheridge and North Tawton.

The geology of the catchment is dominated by Devonian and Carboniferous slates and sandstones

Agriculture is the primary industry in the area although tourism and recreation are important, particularly in coastal areas. Other industries include quarrying, fish farming and the generation of hydroelectric power.

The significant abstractions within this CAMS area are for aquaculture, hydropower and public water supply. Of the consumptive abstractions public water supply licences are by far the largest.

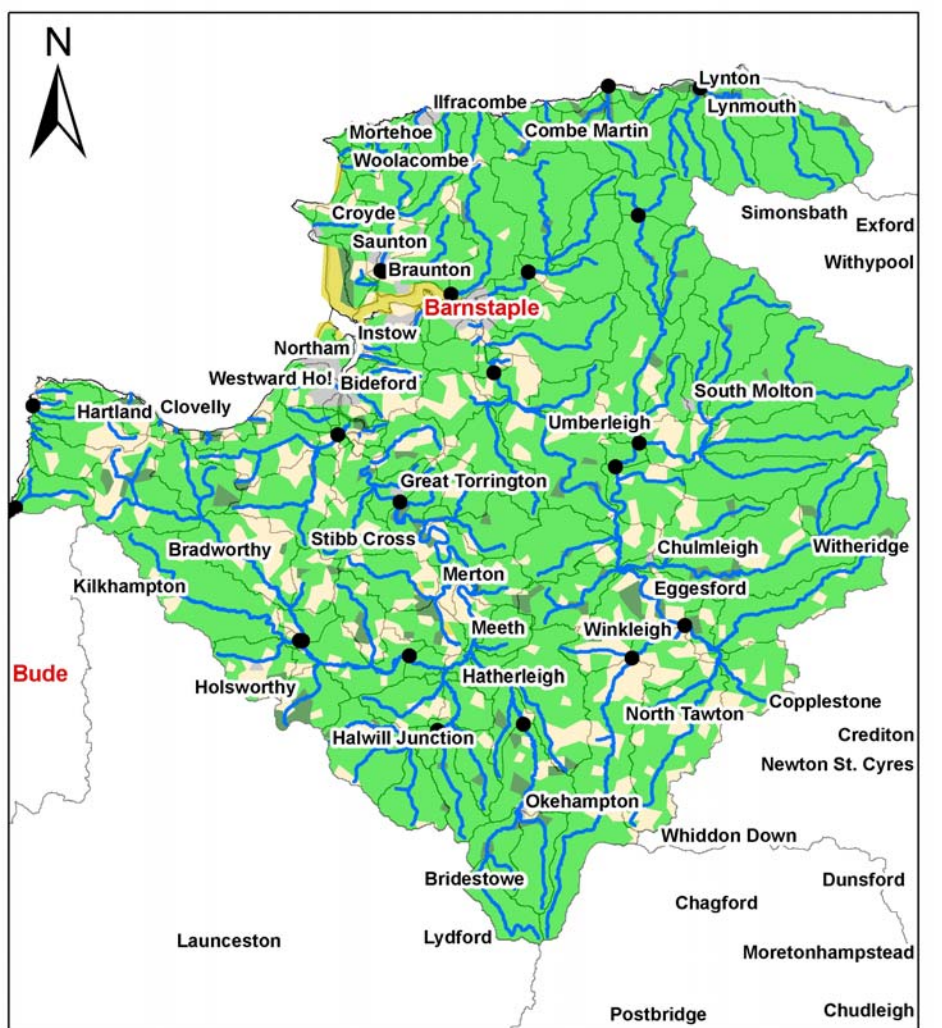
The Torridge & Hartland Streams CAMS area covers over 925 km² from the north of Dartmoor to the north coast of Devon. The catchment includes the River Torridge and tributaries, which drains the majority of the catchment; the coastal streams which drain to the Hartland Coast, and Lundy Island which lies 18km off the North Devon coast.

The Taw-Torridge estuary is a site of special scientific interest (SSSI). There are also many other conservation designations within this area including the North Devon Area of Outstanding Natural Beauty (AONB) and Britain's first UNESCO site, The Biosphere Reserve.

The Torridge & Hartland Streams catchment area is largely rural in nature and is sparsely populated with a few small towns, villages, hamlets and isolated farmsteads.

The upper reaches of the River Torridge and the River Waldon contain the majority of the Culm Measures. The geology of the catchment is dominated by deposits from the Carboniferous period. Permian deposits are present in the south east of the catchment, forming the western extent of the Crediton Trough.

Map 1 shows the North Devon WFD Management Area.



Legend

-  North Devon WFD Management Area Rivers
-  North Devon WFD Management Area WBs
-  North Devon WFD Management Area APs
-  Arable
-  Managed Grassland
-  Forestry / Woodland
-  Semi Natural Vegetation
-  Urban
-  Water

0 3 6 12 18 24 Kilometres

© Crown copyright. All rights reserved.
Environment Agency 100026380. 2011.

Some features of this map are based on digital spatial data licensed from the Centre for Ecology and Hydrology, © CEH.

Creation date 26 September 2011

Map 1. North Devon WFD Management Area

3. Water resource availability of the North Devon WFD Management Area

3.1. Resource assessment

Resource assessment is at the heart of abstraction management. To manage water effectively we need to understand how much is available and where it is available, after considering the needs of the environment. We have a monitoring network to measure river flows and groundwater levels. We use this data along with our knowledge of human influences and environmental needs to establish a baseline of water availability for each water body that builds into a picture for the catchment. The main components of this assessment that help us to understand the availability of water resources are:

- a resource allocation for the environment defined as a proportion of natural flow, known as the Environmental Flow Indicator (EFI);
- the Fully Licensed (FL) scenario - the situation if all abstraction licences were being used to full capacity;
- the Recent Actual (RA) scenario – the amount of water, which has actually been abstracted on average over the previous six years.

River flows change naturally throughout the year, so we want to protect flow variability in our rivers from low to high flow conditions. We use flow statistics to help to do this. Flow statistics are expressed as the percentage of time that flow is exceeded. Resource availability is calculated at four different flows, Q95 (lowest), Q70, Q50 and Q30 (highest).

This information gives a realistic picture of what the current resource availability is within a given water body. Water bodies are sub-catchment surface water units or ground water units on which we carry out assessments and map results.

3.2. Resource availability

3.2.1. Surface water

If you want to abstract water, you need to know what water resources are available within a catchment and where abstraction for consumptive purposes is allowed. To show this we have developed a classification system which indicates:

- the relative balance between the environmental requirements for water and how much is licensed for abstraction;
- whether water is available for further abstraction;
- areas where abstraction may need to be reduced.

The availability of water for abstraction is determined by the relationship between the fully licensed and recent actual flows in relation to the EFI. The results mapped onto these water bodies are represented by different water resource availability colours showing the availability of water resource for further abstraction. The water resource availability colours are explained in Table 1. In addition to these water resource availability colours we've classified some surface water bodies as 'high hydrological status' which are coloured blue on the maps. In these water bodies very little actual abstraction occurs and they show virtually undisturbed, or close to natural, flow conditions.

Another category of water body is Heavily Modified Water Bodies (HMWB). These can be classified for many reasons but for water resources they are classified if they contain a lake and/or reservoir that influences the downstream flow regime of the river. The downstream 'flow modified' water bodies are also classified as heavily modified. We'll add any conditions necessary to protect flows to a new licence during the licence determination procedure. We'll base these on the water resource availability colours from high to low flows. Table 1 lists the implications for licensing for each water resource availability colour.

In cases where there is a flow deficit (RA is below the EFI) or risk of a flow deficit (FL below the EFI), there may be water available for abstraction at higher flows. This means that water may be scarce at low flows, but may be available to abstract at medium or high flows. A licence may still be granted but with conditions which protect the low flows. This usually takes the form of a Hands Off Flow (HOF) condition on a licence which requires abstraction to stop when the river flow falls below a certain amount. A river may also be heavily supported by flows from a reservoir and may have unnaturally high 'low' flows which means that the river environment is most vulnerable at medium flows. When assessing water availability we have to consider downstream requirements i.e. existing licences and environmental needs. To help us protect these downstream requirements we colour water bodies with the worst downstream resource availability colour, this is reflected in Map 2, Map 3, Map 4 and Map 5.

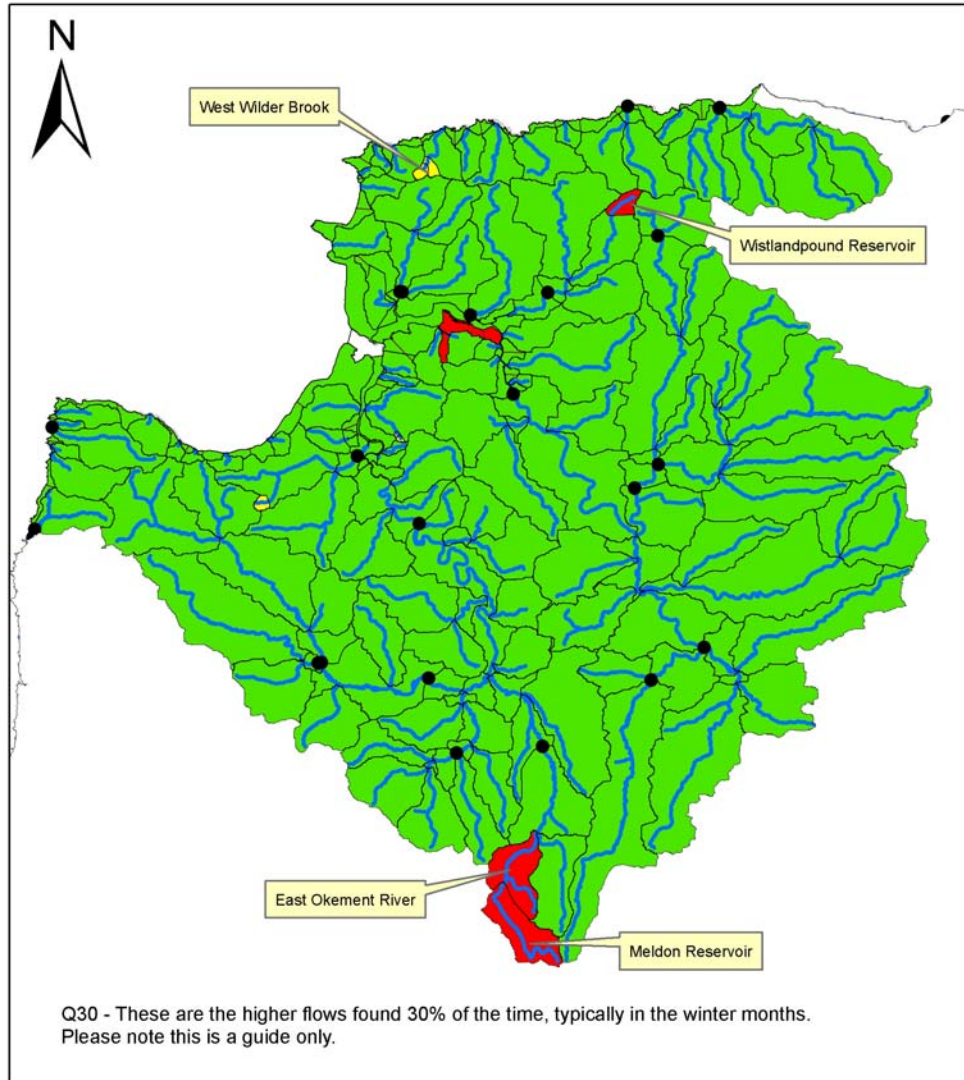
| Water resource availability colour | Implication for licensing |
|--|---|
| High hydrological regime | There is more water than required to meet the needs of the environment. However, due to the need to maintain the near pristine nature of the water body, further abstraction is severely restricted. |
| Water available for licensing | There is more water than required to meet the needs of the environment. New licences can be considered depending on local and downstream impacts. |
| Restricted water available for licensing | Full Licensed flows fall below the EFIs. No new consumptive licences would be granted. It may also be appropriate to investigate the possibilities for reducing fully licensed risks. Water may be available if you can 'buy' (known as licence trading) the entitlement to abstract water from an existing licence holder. |
| Water not available for licensing | Recent actual flows are below the EFI. This scenario highlights water bodies where flows are below the indicative flow requirement to support Good Ecological Status (GES) (as required by the Water Framework Directive. Note – We are currently investigating water bodies that are not supporting GES/GEP). No further consumptive licences will be granted. Water may be available if you can 'buy' the entitlement to abstract water from an existing licence holder (known as licence trading). |
| Heavily Modified Water Bodies | These water bodies have modified flows that are influenced by reservoir compensation releases or they have flows that are augmented. These are often known as 'regulated rivers'. They may be managed through an operating agreement, often held by a water company. The availability of water is dependent on these operating agreements. More detail, if applicable, is provided in section 4.2.1 Surface Water. |

Table 1. Implications of water resource availability colours.

3.2.2. Groundwater

Groundwater availability is guided by the surface water resource availability colours unless we have better information on major aquifers or are aware of local issues we need to protect.

North Devon WFD Management Area Resource Colours at Q30



Legend

- Assessment Points
- WFD Water Bodies
- Rivers

Resource Colours

- Water available for licensing
- Restricted water available for licensing
- Water not available for licensing

0 3 6 12 18 24 Kilometres

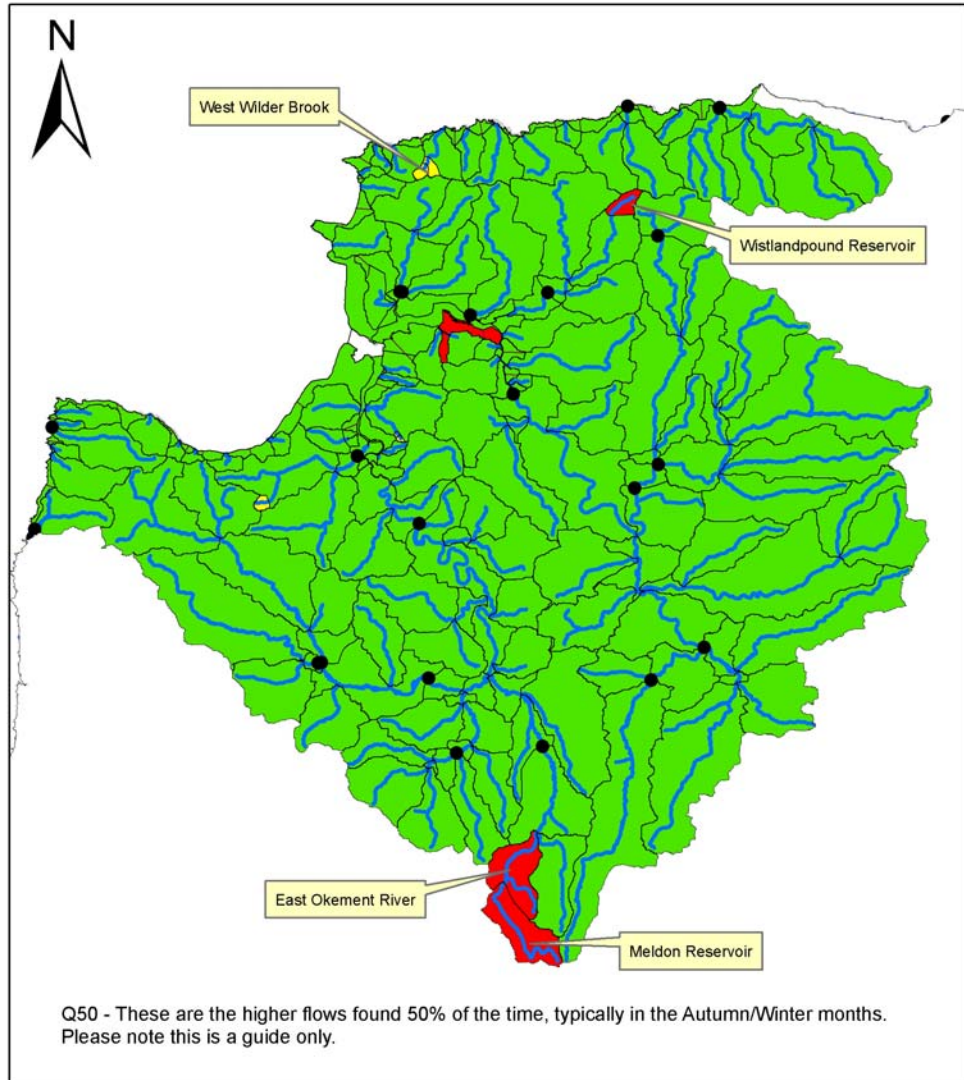
© Crown copyright. All rights reserved.
Environment Agency 100026380. 2011.

Some features of this map are based on digital spatial data licensed from the Centre for Ecology and Hydrology, © CEH.

Creation date 14 December 2012

Map 2. Resource colours at Q30

North Devon WFD Management Area Resource Colours at Q50



Legend

- Assessment Points
- WFD Water Bodies
- Rivers

Resource Colours

- Water available for licensing
- Restricted water available for licensing
- Water not available for licensing

0 3 6 12 18 24 Kilometres

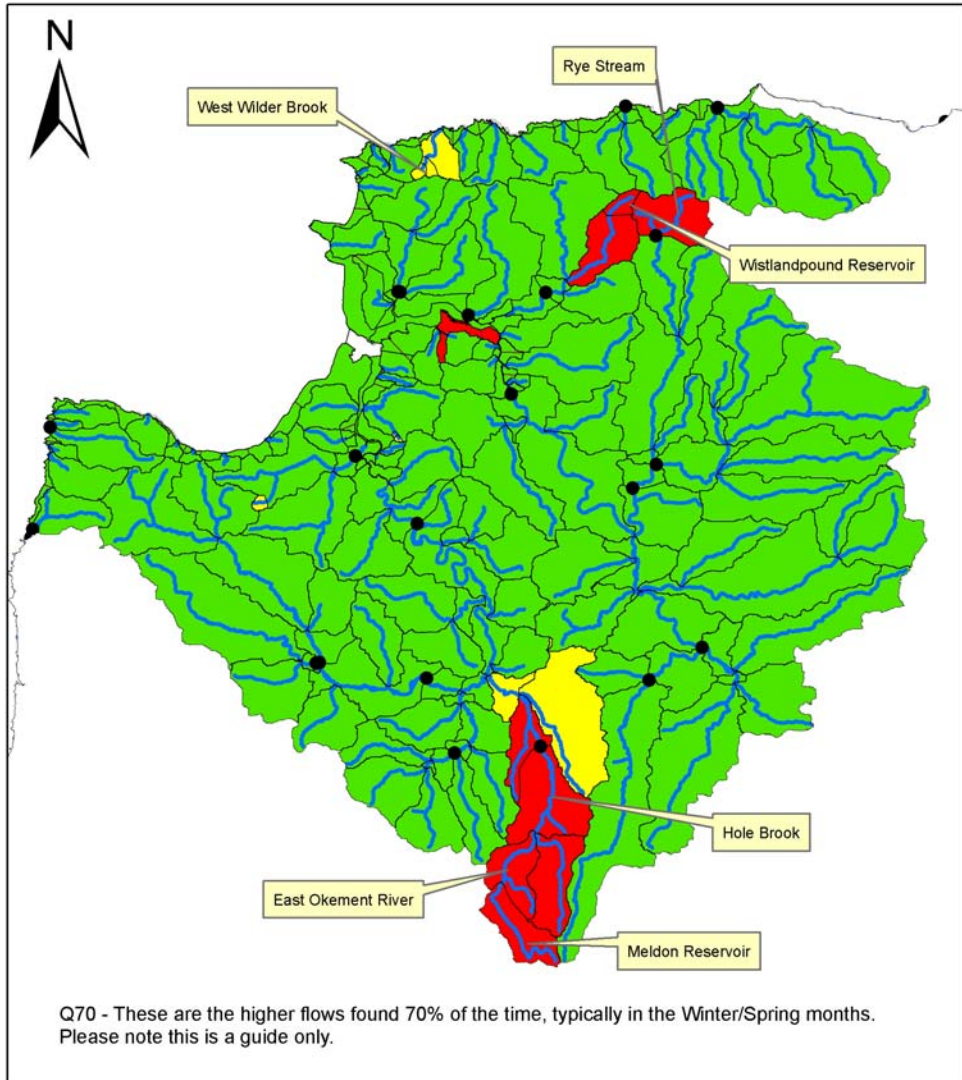
Creation date 14 December 2012

© Crown copyright. All rights reserved.
Environment Agency 100026380. 2011.

Some features of this map are based on digital spatial data licensed from the Centre for Ecology and Hydrology, © CEH.

Map 3. Resource colours at Q50

North Devon WFD Management Area
Resource Colours at Q70



Legend

- Assessment Points
- WFD Water Bodies
- Rivers

Resource Colours

- Water available for licensing
- Restricted water available for licensing
- Water not available for licensing

0 3 6 12 18 24 Kilometres

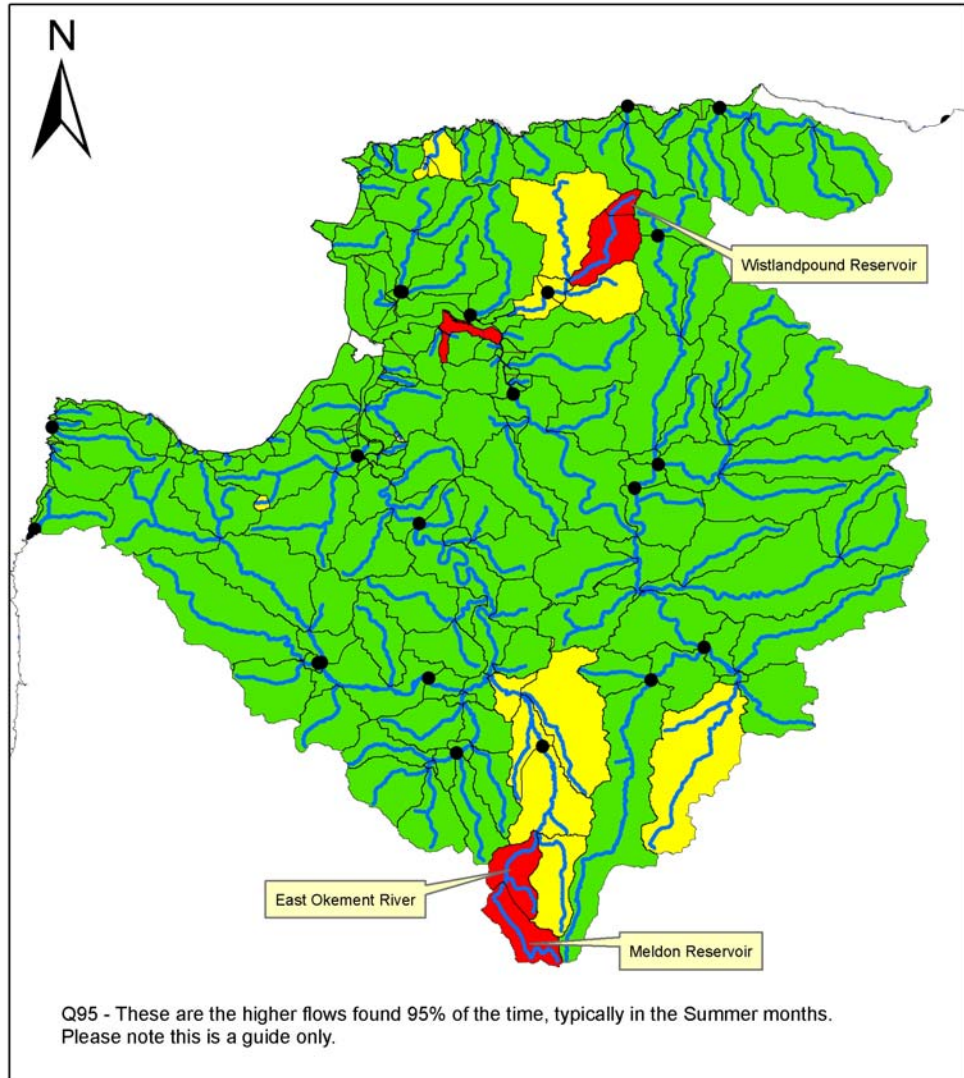
© Crown copyright. All rights reserved.
Environment Agency 100026380. 2011.

Some features of this map are based on digital spatial data licensed from the Centre for Ecology and Hydrology, © CEH.

Creation date 14 December 2012

Map 4. Resource colours at Q70

North Devon WFD Management Area
Resource Colours at Q95



Legend

- Assessment Points
- WFD Water Bodies
- Rivers

Resource Colours

- Water available for licensing
- Restricted water available for licensing
- Water not available for licensing

0 3 6 12 18 24 Kilometres

© Crown copyright. All rights reserved.
Environment Agency 100026380. 2011.

Some features of this map are based on digital spatial data licensed from the Centre for Ecology and Hydrology, © CEH.

Creation date 14 December 2012

Map 5. Resource colours at Q95

3.3. Resource reliability

If you want to apply for a licence, it is worth considering that in some areas a new, consumptive abstraction may not be 100% reliable. Reliability information is based on CAMS resource availability colours and is a way of presenting the reliability of new abstractions at all flows.

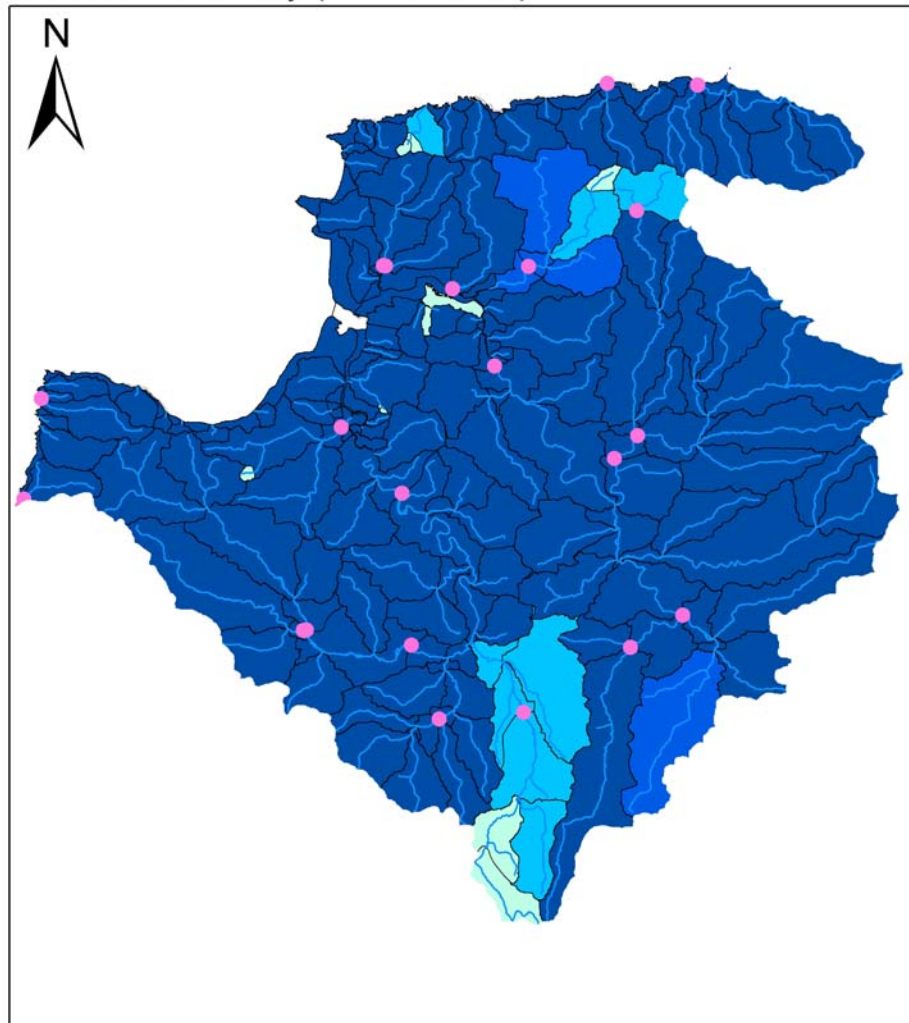
The availability of water for abstraction within a river varies greatly from high to low flows. By assessing the quantity of water available at different flows it is possible to see when there is a surplus or deficit of water and the associated reliability of an abstraction. This is an indication only; actual reliability of a licence will be discussed on application.

Table 2 shows the resource availability colour associated with the percentage reliability of consumptive abstraction. Map 6 gives an **indication** of the resource reliability in the North Devon area expressed as percentage of time.

| Resource | Percentage of the time additional consumptive resource may be available |
|----------|---|
| | Consumptive abstraction available less than 30% of the time. |
| | Consumptive abstraction available at least 30% of the time. |
| | Consumptive abstraction available at least 50% of the time. |
| | Consumptive abstraction available at least 70% of the time. |
| | Consumptive abstraction available at least 95% of the time. |
| | Not assessed |

Table 2. Percentage reliability of consumptive abstraction.

North Devon WFD Management Area
Resource Reliability (% of the time)



Legend

- Assessment Points
- Rivers
- WFD Water bodies
- Water Resource available less than 30% of the time
- Water Resource available at least 30% of the time
- Water Resource available at least 50% of the time
- Water Resource available at least 70% of the time
- Water Resource available at least 95% of the time

0 2 4 8 12 16 Kilometres

Creation date 15 October 2012

© Crown copyright. All rights reserved.
Environment Agency 100026380. 2011.

Some features of this map are based
on digital spatial data licensed from the
Centre for Ecology and Hydrology, © CEH.

Map 6. Water resource reliability expressed as percentage of time available.

4. How we manage abstractions in the North Devon WFD Management Area

4.1. Principles

The document Managing Water Abstraction outlines the over-arching principles that we follow in managing our water resources. How we apply these principles in the North Devon WFD Management Area is outlined in this section. If you want to abstract water it outlines where water is available for further abstraction and the principles we follow in assessing your application for a licence.

Abstraction licence application process

Anyone wanting to take more than 20m³/day from a 'source of supply' (river, stream, lake, well, groundwater, etc) must have an abstraction licence. The application process for abstraction is similar to the planning process in that we may require the application to be advertised and may require supporting environmental information. When considering the application we check that the quantities applied for and the purpose of the abstraction are reasonable, that there is sufficient water available to support it and that the potential impacts on the environment and other water users are acceptable. Depending on the outcome of our investigations we will issue a licence either as applied for, or with conditions that restrict the abstraction to protect the environment or other users. In certain cases we may have to refuse the application. Any applicant who is not happy with our determination (decision) has the right to appeal against it.

Each application is determined on its own merits

Whilst this document may say that water is available for further abstraction, this does not guarantee that all applications will be successful. We'll determine each application upon its own merits and any local impacts.

A licence does not guarantee that water is available

It's important to understand that when we issue a licence we do not guarantee the supply of water. We have to protect the environment and rights of other abstractors. To do this we may add constraints to licences. Licence holders need to understand the implications of this as it affects the reliability of supply. For example, in drier years it's more likely that conditions will come into effect and abstraction is more likely to be stopped.

Exempt areas

Some abstractions do not need to be licensed; for example, those that do not need to exceed 20 cubic metres per day. Other abstractions are exempt because they take place in a part of the country where a general exemption has been given from the need for abstractions to be licensed. The existence of these exempt areas could prevent the proper management of water resources. Under the Water Act 2003, Section 10 there will be a staged removal of existing areas.

One area in the North Devon WFD Management area is currently exempt from abstraction licensing. This area includes the parishes of Combe Martin, Trentishoe, Martinhoe, Parracombe, Lynton, Brendon, Oare and Countisbury. Also areas around Barnstaple, Bishops Nympton, Hartland and Okehampton. Within this 'exempt area' there are strips of land adjacent to rivers where an abstraction licence is nevertheless required. Please contact us to find out if you are in one of these areas.

Abstractions are managed to protect the environment.

No ecological deterioration

We assess the impact of new applications for water to make sure that the resultant river flows:

- will maintain a good ecology or if the ecology is not good, will not deteriorate the ecology of our rivers further;
- will maintain the near pristine condition of high hydrological regime water bodies.

We'll also take action if necessary to limit the increase in current abstraction, if we think this will lead to deterioration of the ecology or the near pristine condition of our high hydrological regime water bodies.

These principles apply to the water body in which the abstraction is located and also to all downstream water bodies that may be affected by any reduction in abstraction related flow. Doing this means that we will maintain the water body status as reported in the River Basin Management Plans (2009) and ensure compliance with the European Union Water Framework Directive.

Water efficiency and demand management

We need to make the best use of our existing water resources. Adopting water efficiency and demand management measures can help us achieve this goal. Water efficiency is one of the tests that will need to be satisfied before we grant a new licence or renew a time limited licence. We will promote the wise and efficient use of water and actions to limit demand (and reduce leakage) to curb the growth in abstraction and limit the impact on flows and any consequent impact on the ecology.

Impoundments

Applications for impoundments will be dealt with on a case-by-case basis. An impoundment is a dam, weir or other construction in an inland waterway that obstructs or impedes flow and/or raises water levels.

Hydropower

Water abstraction for hydropower schemes is non-consumptive, with all water used returned to the watercourse. Hands of Flows and maximum abstraction volumes are determined in line with the Environment Agency's Hydropower Good Practice Guidelines and based on the assessment of environmental risk for each scheme. Anyone wishing to abstract for hydropower should refer to the hydropower information on our [website](#).

Applying for an abstraction licence

If you want to apply for an abstraction licence or make changes to a licence that you already have then, please contact us:

- by telephone on 03708 506506
- by email at enquiries@environment-agency.gov.uk
- or visit our website at www.environment-agency.gov.uk where information on 'abstraction' can be found through the keyword search facility.

4.2. Abstraction restrictions

When issuing a licence we have to protect the environment and rights of other abstractors. To do this we may add conditions to licences.

Time limited licences

In recognition of changing pressures on water resources all new licences and variations (other than downward variations or minor variations having no environmental impact) will have a time limit imposed. This allows for the periodic review and changes to abstraction licences where circumstances have changed since the licence was granted.

All new licences within a CAMS area have a common end date (CED) so they can be reviewed at the same time. When an application is made within 6 years of the CED, we will generally apply the subsequent CED to any licence granted. This is to avoid issuing shorter and shorter duration licences as the CED approaches. This means that the initial CED on a licence may be between 6 and 18 years duration. On replacement the normal duration will then usually be 12 years. However, where we are uncertain about the long term impacts of an abstraction we will grant a short term licence during which time potential impacts are monitored.

10% of the licences in the Taw and North Devon Streams CAMS are time-limited. CEDs occur every 12 years. The next CED for the Taw & North Devon Streams CAMS is 31 March 2018 and the subsequent one is 31 March 2030.

33% of the licences in the Torridge & Hartland Stream CAMS are time-limited. The next CED for the Torridge & Hartland Stream CAMS is 31 March 2015 and the subsequent one is 31 March 2027.

Additional information about the replacement of time limited licences is available in [Managing Water Abstraction](#).

Hands off flow conditions

To protect the environment we may issue a licence with a condition referred to as a 'Hand-Off Flow' (HOF). This specifies that if the flow in the river drops below that which is required to protect the environment abstraction must stop, hence 'Hands-Off Flow'.

4.2.1. Surface water

We assess surface water flows at Assessment Points (APs) which are significant points on the river, often where two major rivers join or at a gauging station. All new abstractions may be subject to HOFs.

Table 3a and 3b gives an indication of how much water is available for further abstraction and how reliable the available water would be (% of the time), please note this is a guide only. Also, the associated restrictions that we may apply to new and varied abstraction licences from the main river. Tributaries to the main river may be subject to different restrictions and quantities.

Each HOF is linked to an AP and is dependent on the resource availability at that AP. In some cases additional restrictions may apply to licences where there is a more critical resource availability downstream to protect the ecological requirements of the river.

All abstraction licence applications are subject to an assessment to take account of any local and downstream issues and may be subject to further restrictions.

Reading from top to bottom in Tables 3a and 3b are the APs in North Devon WFD Management Area. Reading across the columns you can see the potential HOF that may be applied to a licence, how reliable the water would be (% of the time), and the approximate volume of water in MI/d that may be available. In cases where there is water available at all flows we may apply a Minimum Residual Flow (MRF) to protect very low flows. We'll decide this on a case by case basis.

| AP | Name | HOF Restriction | Percentage Reliability (% in time) | Approximate volume in MI/d |
|----|-----------------|-----------------|------------------------------------|----------------------------|
| 1 | COLLARD BRIDGE | HOF2 | 79 | 2 |
| 2 | BRADIFORD WATER | MRF | 100 | 1 |
| 3 | WRAFTON | MRF | 100 | 0.7 |
| 4 | VELATOR BRIDGE | MRF | 100 | 1 |
| 5 | NEW BRIDGE | MRF | 100 | 14 |
| 6 | TAW BRIDGE | MRF | 100 | 1 |
| 7 | LAPFORD YEO | MRF | 100 | 1 |
| 8 | WOODLEIGH | MRF | 100 | 11 |
| 9 | MOLE BRIDGE | MRF | 100 | 6 |
| 10 | HEDDONS MOUTH | MRF | 100 | 1 |
| 11 | RIVERSIDE ROAD | MRF | 100 | 1 |
| 12 | LYNDALE BRIDGE | MRF | 100 | 5 |
| 13 | LEEAMFORD | MRF | 100 | 0.6 |

Table 3a. HOFs for the assessment points of Taw and North Devon CAMS as at 1 May 2012.

Please Note: This is given as a guide only.

| AP | Name | HOF Restriction | Percentage Reliability (% in time) | Approximate Volume in MI/d |
|----|----------------|-----------------|------------------------------------|----------------------------|
| 1 | MILL BRIDGE | HOF1 | 100 | 6.3 |
| 2 | TORRINGTON GS | MRF | 100 | 9 |
| 3 | ROCKHAY GS | MRF | 100 | 6 |
| 4 | WALTERSMOOR | MRF | 100 | 0.6 |
| 5 | HENSCOTT | MRF | 100 | 4 |
| 6 | GRIBBLEFORD GS | MRF | 100 | 0.1 |
| 7 | JACOBSTOWE GS | HOF4 | 56 | 9 |
| 8 | WELCOMBE MOUTH | HOF1 | 100 | 1.3 |
| 9 | BERRY CLIFF | MRF | 100 | 0.1 |

Table 3b. HOFs for the assessment points of Torridge and Hartland Streams CAMS as at 1 May 2012.

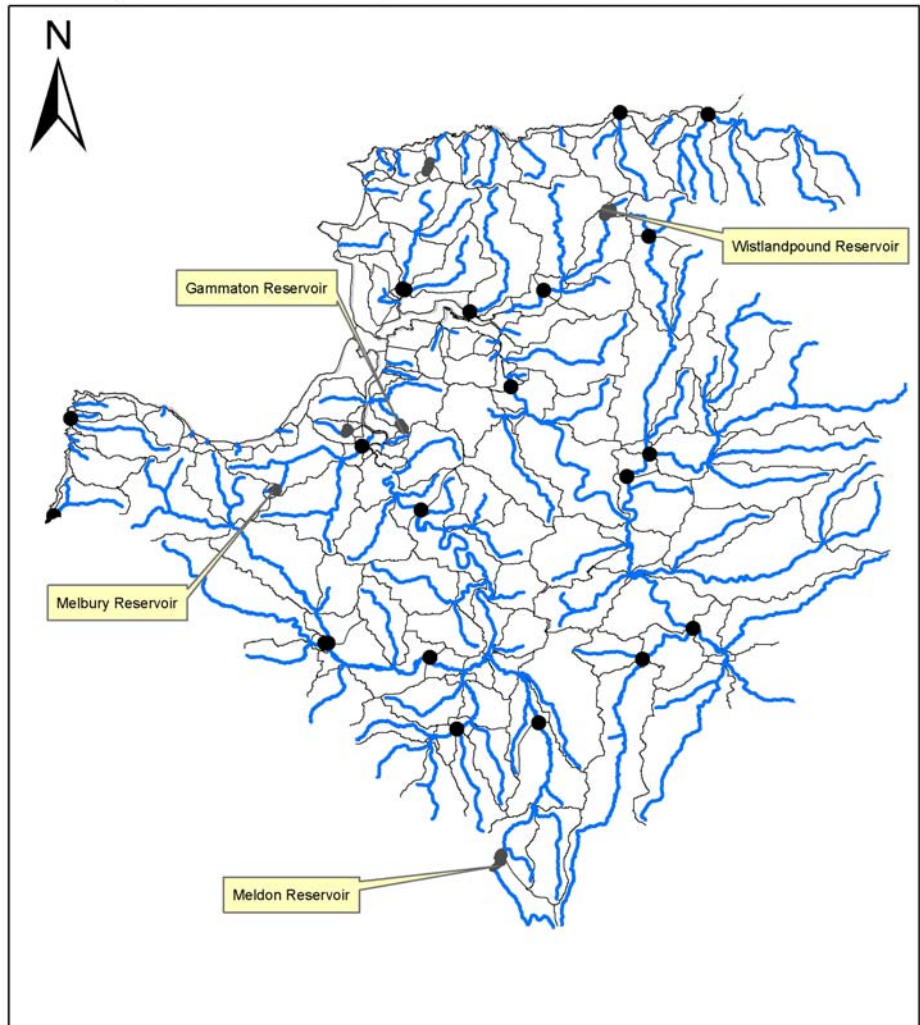
Please Note: This is given as a guide only.

Water Resources Heavily Modified Water Bodies

Heavily Modified Water Bodies are designated in accordance with WFD criteria. A Heavily Modified Water Body is a surface water body that's physical structure has changed to enable a specific use, e.g. construction of a reservoir. The WFD objective for a Heavily Modified Water Body is for it to achieve good ecological potential (GEP) usually, by 2027, although this can vary.

Map 7 shows the Heavily Modified Water Bodies (Water Resources) in the North Devon WFD Management Area.

North Devon WFD Management Area
Heavily Modified and Artificial Water Bodies
(Water Resources)



Legend

- Assessment Points
- North Devon Rivers
- WFD Water Bodies
- Heavily Modified and Artificial Lakes
- Heavily Modified and Artificial Rivers

0 3 6 12 18 24 Kilometres

© Crown copyright. All rights reserved.
Environment Agency 100026380. 2011.

Some features of this map are based
on digital spatial data licensed from the
Centre for Ecology and Hydrology, © CEH.

Creation date 16 October 2012

Map 7. Heavily Modified and Artificial Water Bodies.

4.2.2. Groundwater

Where groundwater abstractions directly impact on surface water flows, the impact is measured at the surface water AP. Restrictions may be applied to these licences. On major aquifers we have divided the area into groundwater management units. We use the information and assessments on these units to determine water availability and licence restrictions.

Where groundwater abstractions are likely to impact fens, or reduce baseflow to a river, a Hands off Level condition may be applied to the abstraction. This is a river level below which an abstractor is required to reduce or stop abstraction. There are no groundwater management units within this WFD Management Area.

4.2.3 Estuaries/coast

The reasoning behind why we need to carry out Investigations in these water bodies is that “Technical solutions to address the ecological impact caused by the physical modification are under development and their effectiveness is not yet known. In these water bodies there is a known morphological pressure (a physical modification) and an observed biological impact but uncertainty surrounds the effectiveness of the measure(s) available to reduce that impact.” (South West River Basin Management Plan)

Barnstaple Bay (WFD Coastal Water Body ID – GB610807680003)

The Barnstaple Bay Water Body is classified as being at Good Ecological Status (GES). There are no investigations

Bideford Bay (WFD Coastal Water Body ID – GB610807240000)

Bideford Bay Water Body is currently classified Moderate, with its objective to get to good by 2027. The justification for not achieving good by 2015 is that it would be disproportionately expensive to achieve this.

The failing biological element is phytoplankton. We are uncertain in this moderate classification and as such there are two investigations in place on this Water Body. Firstly to confirm if there is a failure, and if so, investigate reason for failure.

Bristol Channel Inner South (WFD Coastal Water Body ID – GB640807670000)

This Water Body has been designated Heavily Modified. The reason for this designation is coastal protection.

The Water Body is currently classified as Moderate with the failing element being Dissolved Inorganic Nitrogen. There is an investigation in place to confirm this failure.

Bristol Channel Outer South (WFD Coastal Water Body ID – GB610807680004)

The Bristol Channel Outer South is classified at GES. There are no Investigations.

Taw/Torridge (WFD Transitional Water Body ID – GB540805015500)

This Water Body has been designated Heavily Modified. The reason for this designation is flood protection.

The Water Body is classified as Moderate, with the failing element being Dissolved Inorganic Nitrogen.

There are two investigations on this Water Body, to confirm the failure for Dissolved Inorganic Nitrogen, and to carry out a Mitigation Measures Assessment to investigate feasible measures to get this Water Body to Good Ecological Potential.

4.3. Opportunities for licence trading

We want to make it easier to trade water rights. A water rights trade is where a person sells all or part of their water right, as defined by their abstraction licence(s), to another person on a permanent or temporary basis. In the majority of cases a trade will involve a change in abstraction location and/or use which we will need to approve through the issue or variation of abstraction licences.

In licensing trades, as with new abstraction licences, we need to make sure that we do not cause any deterioration in WFD water body status, both within the water body/bodies where the trade will take place or to downstream water bodies. The table below provides a guide to the potential for trading in water bodies of a particular CAMS water resource availability colour, as shown on Map 2, Map 3, Map 4 and Map 5.

| CAMS water resource availability colour | Our approach to trading |
|--|--|
| High hydrological regime | Opportunities for trading water rights will be limited. |
| Water available for licensing | Allow trades of recent actual abstraction and licensed abstraction, but little demand for trading expected within water body as water available for new abstractions. |
| Restricted water available for licensing | There may be opportunities for licence holders to trade up to their full licensed quantities, but the quantities of water available to trade may be restricted once levels of actual abstraction reach sustainable limits. |
| Water not available for licensing | We will only trade recent actual abstraction but no increase in recent actual abstraction is permitted in water body. Licensed abstraction will be recovered for the environment. |
| Heavily Modified Water Bodies | Opportunities for trading will depend on local operating agreements and local management. |

Table 4. CAMS approach to trading

To find out more about licence trading please go to our [website](#).

4.4. New Authorisations

The Water Act 2003 brought all significant water abstraction under licensing control. This will result in trickle irrigation, dewatering of mines, quarries, engineering works and construction sites, abstractions related to Internal Drainage Districts, navigation abstraction and abstraction for ports and harbour authorities coming into the licensing regime.

As a result we'll be able to manage water resources more effectively by ensuring that all significant activities influencing the availability of water and its impact on the environment are undertaken in a sustainable manner.

Government are still developing their policies as to how to resolve some of the issues raised during the consultation process. Government will publish their proposals before new regulations are implemented and expect to do this at least 3 months before commencement so that we can issue guidance to those affected by changes.

Where we have details of these abstractions we have included them in our assessments to consider how they impact on the catchment.

4.5. Restoring Sustainable Abstraction

Where water abstractions cause or potentially cause flows to fall short of the EFIs this could result in environmental damage. We have assessed this catchment at water body level to identify all these potential sites. Since 2010 they have been under review to confirm whether these non-compliant flow locations are genuine and whether if so, the flows are directly affecting the ecological wellbeing of the watercourses involved. Any of these water bodies where our investigations show there is a detrimental impact on the ecology of the river will be looked at in more detail and options for the site appraised in order that this impact is addressed and the issue solved.

Further information on how licences in the RSA programme are dealt with can be found in our [website](#).

Investigation Water Framework Directive Water Bodies

In addition to the RSA programme, we are investigating whether reduced water flow may be causing problems under the Water Framework Directive (WFD). About 4 per cent of rivers are failing to support WFD good ecological status due to pressures from over abstraction.

We are, or have been, investigating around 1,000 river water bodies (including 300 heavily modified), and 350 lake/reservoir water bodies where hydrology may not be supporting good ecological status or good ecological potential. Half of the river water body investigations are already complete. Of these, around half required no further action.

Important local features that may affect water availability

European law provides a very high level of protection to two types of designated sites due to their special environment. These are:

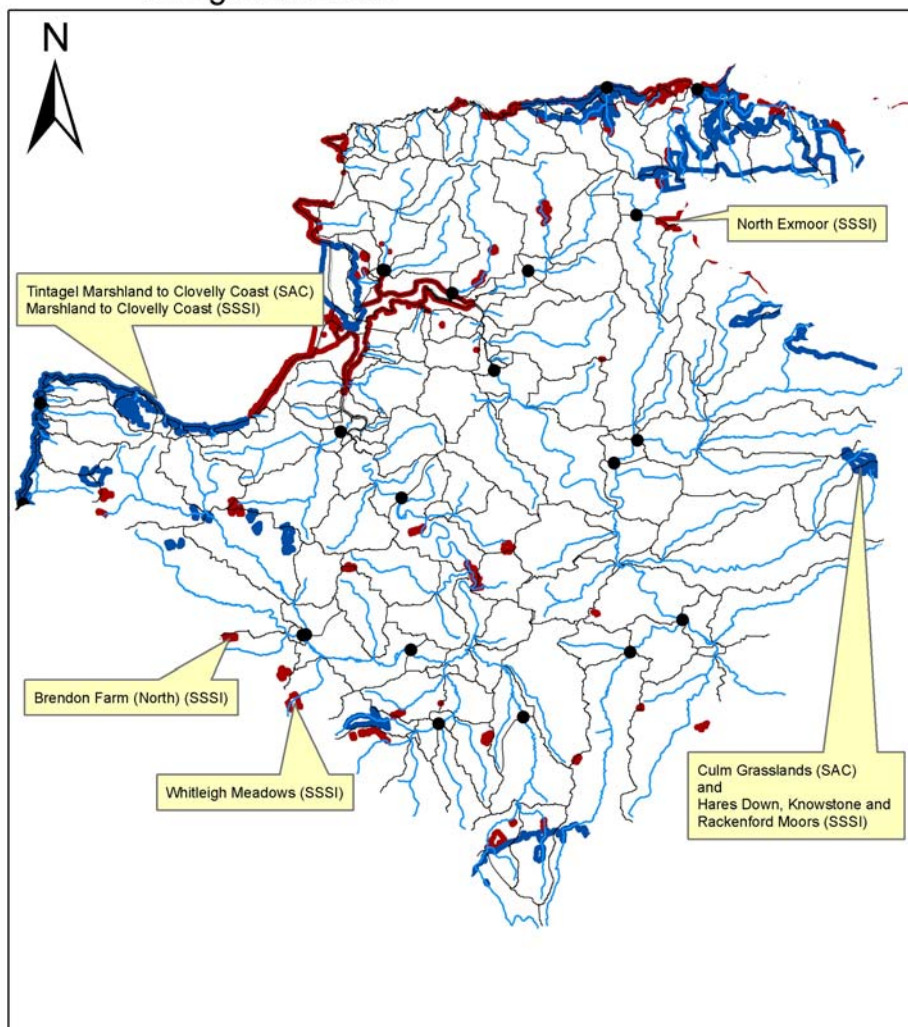
- Special Areas of Conservation (SAC), which contribute to biodiversity by maintaining and restoring habitats and species;
- Special Protection Area (SPA), which provides protection to birds and their nests, eggs and habitats

Ramsar sites and Sites of Special Scientific Interest (SSSI) also carry a high level of environmental importance. There are no Ramsar sites in the North Devon WFD Management Area.

Map 8 shows designated sites in the North Devon WFD Management Area.

Additional information can be found on the [Natural England Website](#).

North Devon WFD Management Area
Designated Sites



Legend

- Assessment Points
- Rivers
- WFD Water bodies
- SACs
- SPAs
- SSSIs

0 2 4 8 12 16 Kilometres

Creation date 15 October 2012

© Crown copyright. All rights reserved.
Environment Agency 100026380. 2011.

Some features of this map are based
on digital spatial data licensed from the
Centre for Ecology and Hydrology, © CEH.

Map 8. Designated Sites.

Habitats Directive

Under the Habitats Regulations we have assessed the effects of existing abstraction licences on water dependent SAC's and SPA's, and will assess new applications to make sure they are not impacting on these internationally important nature conservation sites. If your current licence has been reviewed under this legislation to assess its impact you will already know about the review. If we haven't contacted you yet then your licence is either not near a SAC/SPA or isn't having an impact on these sites. If our assessment shows that a new application could have an impact on a SAC/SPA we have to follow strict rules in setting a time limit for that licence. These are:

- we may be able to grant the licence but only with a short time limit. This allows us to monitor the impact of the abstraction on a SAC/SPA and change the licence if necessary;
- if we can't determine that your application will not affect the site we have to either put conditions on the licence so that it cannot affect the site or refuse the application. If we grant the licence we may ask you to monitor its impact;
- if our assessment shows that there isn't an impact on the site we will manage the application according to the principles in this document.
- The approach taken by Natural England as a starting point/guideline, is to assess the impact (at any point in the SAC) of abstractions, this should be less than 10% of the naturalised daily mean flow throughout the year.

Glossary of terms

| | |
|------------------------------|---|
| Abstraction | Removal of water from a source of supply (surface or groundwater). |
| Abstraction licence | The authorisation granted by the Environment Agency to allow the removal of water. |
| Assessment Point | Point at which the flow from upstream catchment is assessed. |
| Catchment | The area from which precipitation and groundwater will collect and contribute to the flow of a specific river. |
| Consumptive abstraction | Abstraction where a significant proportion of the water is not returned either directly or indirectly to the source of supply after use. For example for the use of spray irrigation. |
| Discharge | The release of substances (i.e. water, sewage, etc.) into surface waters. |
| Environmental flow indicator | Flow indicator to prevent ecological deterioration of rivers, set in line with new UK standards set by UKTAG. |
| Full licence | A licence to abstract water from a source of supply over a period of 28 days or more |
| Groundwater | Water that is contained in underground rocks. |
| Hands off flow | A condition attached to an abstraction licence which states that if flow (in the river) falls below the level specified on the licence, the abstractor will be required to reduce or stop the abstraction. |
| Hands off level | A river flow or borehole (groundwater) level below which an abstractor is required to reduce or stop abstraction. |
| Impoundment | An impoundment is a structure that obstructs or impedes the flow of inland water, such as a dam, weir or other constructed works. |
| Non consumptive abstraction | Abstraction where 100% of water abstracted is returned to the water course from which it was taken. |
| Protected right | Means a right to abstract, which someone has by virtue of the small abstractions exemptions defined in the Water Act 2003 or by virtue of having an abstraction licence. The right protected is the quantity that can be abstracted up to that allowed by the exemption or the terms of the licence. The small abstraction exemptions defined by the Water Act 2003 are for domestic and agricultural purposes (excluding spray irrigation) not exceeding 20 m ³ /d. |
| Surface water | This is a general term used to describe all water features such as rivers, streams, springs, ponds and lakes. |
| Temporary Licence | For abstractions over 20 cubic metres a day over a period of less than 28 days. |
| Transfer licence | A licence to abstract water from one source of supply over a period of 28 days or more for the purpose of; <ul style="list-style-type: none"> 1. transferring water to another source of supply; or, 2. transferring water to the same source of supply, but at another point, in the course of dewatering activities in connection with mining, quarrying, engineering, building or other operations (whether underground or on the surface); without intervening use. |
| Water body | Units of either surface water or groundwater at which assessments are completed for WFD. |

List of abbreviations

| | |
|--------|--|
| AP | Assessment Point |
| CAMS | Catchment Abstraction Management Strategies |
| CBA | Cost Benefit Analysis |
| CED | Common End Date |
| EA | Environment Agency |
| EFI | Environmental Flow Indicator |
| FL | Full Licensed (scenario) |
| GES | Good Ecological Status |
| GWMU | Groundwater Management Unit |
| HMWB | Heavily Modified Water body |
| HoF | Hands off Flow |
| MI/day | Mega litres per day |
| MRF | Minimum Residual Flow |
| Q30 | These are the higher flows found up to 30% of the time, typically in the winter months. |
| Q50 | These are the higher flows found up to 50% of the time, typically in the Autumn/Winter months. |
| Q70 | These are the higher flows found up to 70% of the time, typically in the Winter/Spring months. |
| Q95 | These are the higher flows found up to 95% of the time, typically in the Summer months. |
| RA | Recent Actual (scenario) |
| RBMP | River Basin Management Plan |
| RSA | Restoring Sustainable Abstraction |
| SAC | Special Areas of Conservation |
| SPA | Special Protection Areas |
| SSSI | Sites of Special Scientific Interest |
| SW | Surface water |
| UKTAG | United Kingdom's Technical Advisory Group |
| WB | Water body |
| WFD | Water Framework Directive |

**Would you like to find out more about us,
or about your environment?**

Call us on

08708 506 506* (Mon-Fri 8am-6pm)

email

enquiries@environment-agency.gov.uk

or visit our website

www.environment-agency.gov.uk

incident hotline 0800 80 70 60 (24 hours)

floodline 0845 988 1188

*** Approximate calls costs: 8p plus 6p per minute (standard landline).
Please note charges will vary across telephone providers**



Environment first: This publication is printed on paper made from 100 per cent previously used waste. By-products from making the pulp and paper are used for composting and fertiliser, for making cement and for generating energy.

LIT - 7641