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B.A.A.NEWS

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October 2014

Nordley winter closures dates

See page 2

Litter, litter everywhere!

See pages 6 & 17

Severn water level regulation

See pages 20 & 29

Nordley closures

Autumn/winter shooting dates

As in previous years, we have agreed to allow shoots to take place on the land around Nordley Pools this winter. On the days the shoots take place no fishing will be allowed for obvious safety reasons. Signs have been put up at Nordley listing the shoot dates which are;

Thursday 2nd October 2014

Thursday 16th October 2014

Thursday 30th October 2014

Thursday 13th November 2014

Thursday 27th November 2014

Thursday 11th December 2014

Thursday 1st January 2015

Thursday 15th January 2015

Thursday 29th January 2015

On these dates warning signs will be put up and the shooters will check that no anglers are fishing before the start of the shoot. We know the closures will be a minor inconvenience for some but their presence has undoubtedly had a positive effect insofar as they appear to have acted as a deterrent to cormorants and goosanders. The complete absence of Canada geese has meant that the platforms are not covered in their droppings.

Pershore weir access

The situation at Pershore is still under review. We are in talks with the land owner over re-establishing access to the weir meadow at Pershore and we are hopeful that we can come to some arrangement which will be acceptable to all concerned. For now however, I'm afraid that there is no access to the weir and members will have to be patient with us whilst these delicate negotiations are on-going. As soon as anything is decided, we will make an official announcement.

Fishing news

Proper bream

Hi,

We fished Birds Meadow today Tuesday 16th September and found it was still fishing well, Pete had 18lb and I had 16lb. Worm did not produce but I had a few good roach on sweet corn and bream on red maggot, but also managed to land a 6lb bream on corn.

Picture of Pete Jones with a proper 7lb 10oz bream.

Regards,

Colin Townsend

Barton perch

Caught by Lukasz Lesniacki, on Dragon Jumper 3" soft lure.

Pensham tench

Hi

Fished Pensham on Sunday 31st August and caught this lovely PB tench weighing 4lb 11oz with another 1lb of small chublets, bleak & roach.

Gordon Beardsmore,

Lower Gornal A/C

Annual Severn visit

For many years I have been visiting the Middle Severn with a group of friends from Norfolk to fish the BAA waters for barbel. Unfortunately I have not been able to accompany the group for the last couple of years (see the September edition for their catch report).

Fortunately I have an old friend who is a BAA member and lives in the Birmingham area. Last year when I visited we parked at Stanley by the level crossing and took a long walk down stream crossing the bridge over Borle Brook to fish at Kinlet just where the large old tree is in the middle of the river, I had a great day catching 9 barbel.

This year we did the same (I see the tree wasn't moved by the recent floods), the river was low after the recent warm dry spell and I fished halibut pellet with a pellet and hemp mix in the feeder. My friend fishing upstream from me had the first barbel which unfortunately came off at the net. I them managed to catch 4 barbel in the 4-5lb range and lost a couple which broke me in the tree. All in all another good days Severn fishing in a great location with good weather.

Bob Bennett

Holiday fortnight

Hi.

A couple of issues I really would like to mention after having spent a couple of really good fortnights on the club waters. Both I and my wife are members of the club and although we live in Plymouth we do manage to get a couple of camping trips to Worcester every year.

During our recent trips to the rivers Severn and Teme, I have to say it still baffles me as to why some (a lot) of anglers still refuse to remove their rubbish from the bank when they leave. I do appreciate the efforts made by the club to stress the point to these people but unfortunately I suspect that these efforts are going to continue to fall on deaf ears. I also appreciate that the culprits are not all BAA club members. Would these people be happy to lose their right to fish some of these excellent spots because of their failure to do the right thing? Well, at least I can say that in four out of the last seven weeks my wife and I have left 29 swims on the rivers Severn and Teme absolutely spotless! One person in the second meadow at Harbour in Arley even decided to use the

swim as an external toilet, which has now been safely buried!! These people should be utterly ashamed of themselves and hopefully some of them are reading these comments if published.

Also, I have never night fished the club waters because whenever I have fished late for barbel before elsewhere, I have only really given it until around midnight and I feel that the cost of a night permit (for my reason) is a tad excessive. Would it be possible to consider a "midnight" permit for people who are too old (like me and my wife) to fish all night. Just a thought.

On a happier note, during our first fortnight, my wife Gaynor had this barbel from Eardington and which weighed exactly 9lb and I had this chub from Arley and which weighed in at 5lb 10oz.

Keep up the good work guys and hopefully some so-called anglers attitudes will change for the better at some point and which should go some way to helping the club retain some of the excellent fishing it has available to them Watch this space eh !

Kind Regards,

Peter and Gaynor Wade
Plymouth

Pershore pike

Here is my second pike of the season caught on a float fished single maggot from the River Avon at Pershore, it weighed in at 9lbs. An earlier pike caught on an old Mepps spoon barely made 1lb.

Harry Treadwell

Deep water!

Hi Bob,

After working with the Fisheries Team yesterday at Lower Moor, Spud and I did go today. We travelled light intending to fish for the bream and both chose one of the new pegs we had cut out.

Using the ground bait feeder I did have a couple of perch and roach but no bream were showing. I decided to set up the waggler and fished 12ft deep into 14ft of water and started to catch few roach. Because I did not have the kit to set up a sliding wag I swapped the rod over to fish a big float Just under my 13ft rod tip and fished at a depth of 14ft and soon found the roach see attached picture. I am sure hemp and tares would have been the bait if only I had brought some!

Regards

Colin Townsend

Barking mad!

Following on from the article in last month's newsletter "Archive Extracts" about eel fishing, I thought you might be interested in this picture of a 3½ lb eel I had at Fladbury whilst pike fishing.

It picked up a dead roach bait and as it said in the article "one of the best fighting fresh water fish" but unlike the article we do not advocate eating them now😊. It actually barked at me so it was soon back into the water!

Regards

Colin Townsend

Fly on the Teme

As requested update of fly fishing the Teme.

I had three hours on the Teme at Cotheridge after fishing the Rea in the morning. On arrival I noticed a lot of fish topping so as I normally do on a new water when fly fishing I will fish a brown dry fly so on went my smallest may fly. This was attacked on every cast however I either pulled out of fish or bumped a few off then landed a small grayling. In the next peg the end of the first meadow where the run off pipe is again bumped a few fish but landed a small chub. The next peg fished was just above the rapids I changed my fly for an olive drop sedge and after missing a lot of takes I had another grayling.

Aid Green (from our Facebook page)

Fishing news record

for last 6 months

fish/catcher	lb	oz	location	method	date caught	BAA News edition
Barbel						
			River Avon			
Steve Evans	13	0	Marlcliff	Luncheon meat	09/08/2014	Sept 2014
Jim Clarke	9	5	Barton			Sept 2014
			River Severn			
Shaun Barrett	11	0	Arley LB	Meat	22/06/2014	July 2014
Gaynor Wade	9	0	Arley Harbour Inn			Oct 2014
Neil Perkins	8	14	Hampton Loade	Pellet		Sept 2014
John Snape	8	12	Arley	Double 8mm pellet	21/06/2014	July 2014
			Pools			
Kevin Smith	6	12	Coppice		19/06/2104	July 2014
Roger O'Malley	5		Coppice	Spiced luncheon meat	May 2014	June 2014
Graham Beck	5		Coppice		mid-March	July 2014
Graham Beck	4		Coppice		mid-March	July 2014
Bream						
			River Severn			
Mark Webb	8	8	Lower Severn	Worm/caster hook bait		Sept 2014
Pete Jones	7	10	Birds Meadow	Corn		Oct 2014
Colin Townsend	6	0	Birds Meadow			Oct 2014
			Pools			
Kevin Smith & Son	4	1	Coppice		04/04/2014	May 2014
Common Carp						
			River Avon			
John Care	10	2	Wasperton	Double elips pellet	03/08/2014	Sept 2014
			Pools			
Dan Hancox	22	3	Coppice		26/07/2014	Aug 2014
Graham Beck	21	8	Coppice	Bread flake	mid-March	July 2014
Roger O'Malley	16	0	Coppice	Halibut pellet/corn		June 2014

Mirror Carp

Pools

Paul Badger	16	4	Coppice	Homemade boilie	26/07/2014	Sept 2014
Kevin Smith	15	13	Coppice		15/07/2014	Aug 2014
Kevin Smith	15	9	Coppice		15/07/2014	Aug 2014
Kevin Smith	15	1	Coppice		15/07/2014	Aug 2014
Kevin Smith	14	13	Nordley 2		31/05/2014	July 2014

Chub

River Severn

Peter Wade	5	10	Arley LB			Oct 2014
John Morgan	4	13	Holt Fleet	Worm	30/06/2014	Aug 2014

River Teme

Brenda Williams	4	7	Lindridge	Trotted maggot	21/08/2014	Sept 2014

Pike

River Avon

Jamie Gormley	15	0		ledgered sardine	24/08/2014	Sept 2014
Harry Treadwell	9	0	Pershore	Float fished single maggot		Oct 2014

Roach

River Severn

Neil Perkins	2	4	Hampton Loade			Sept 2014
Neil Perkins	2	1	Hampton Loade			Sept 2014
Neil Perkins	2	0	Hampton Loade			Sept 2014

Tench

River Avon

John Care	5	0	Wasperton	Double elips pellet	03/08/2014	Sept 2014
Gordon Beardsmore	4	11	Pensham		31/08/2014	Oct 2014
Darren Imms	3	8	Bidford RB			Sept 2014

Executive update

Bailiffing

K Pearson reported that several new bailiffs had been recruited. Bailiffing statistics to date showed that 1678 visits had been made, 2535 anglers checked and 168 removed. Following a series of complaints of illegal night fishing posted on social media sites, bailiffs had carried out evening patrols at Marlcliff and Salford Priors and had advised a number of anglers of their responsibility to be off the water by one hour after sunset.

Evesham Festival

S Wyton reported on a successful attendance at the Evesham Festival despite the adverse weather. 77 memberships had been sold and the tombola made a net profit of £116.

Other items

Confirmation that the re-planting of the coir rolls at Coppice was in hand. This is planned to be done using flag iris which don't get eaten by the geese.

A report had been received that the gates to the level crossing at Sidings Lane, Charlton had been padlocked, however this was now known NOT to be the case.

The problem of bank erosion at Uckinghall Pool had once again been highlighted and urgent remedial measures are required. Enquiries are to be made into possible solutions.

A complaint had been received from the neighbouring farmer at Wasperton, regarding thistle seeds blowing from Association land onto his. John Williams had visited the site and confirmed that this was indeed the case and that the Association had a legal obligation to prevent the spread of wild plant seeds. It was agreed to examine the options for remedying the situation in future years.

Archive extracts

Below are extracts from the October 1958 and 59 editions of the Midland Angler, the forerunner to the BAA News.

It's Boiled 'Bangers' for Barbel

Paul Goss with his 8-pounder—a useful fish from any water.

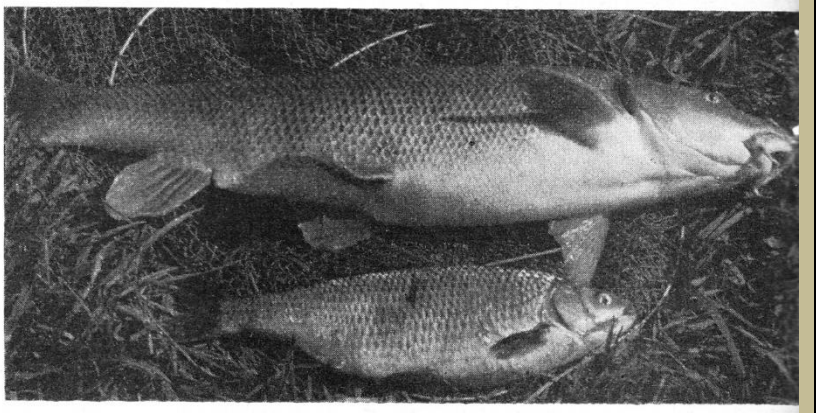
From a small Thames backwater a group of anglers, all keen specimen hunters, have been taking barbel up to 12½ lb. on—believe it or not—beef sausages!

NOT far from my home in Oxfordshire is a backwater of the Thames, a fairly narrow, weedy stretch of river that holds a good head of very large fish. Every year fair numbers of good specimens—mainly barbel—are caught there, and in the hope of catching a really big one, perhaps even a new record for the species, several members of of the Oxford Specimen Hunters' Group spent a fair amount of the last close season investigating the possibilities. They surveyed the water thoroughly and eventually decided to concentrate their attentions on a reach about 300 yards long.

The next step—locating the barbel—proved easier than they anticipated, for during one evening several fish were spotted rolling on top of the water. The result was that that particular spot was marked down as **the** place to be fished constantly.

The usual practice of pre-baiting was, however, not carried out for what must sound a very strange reason. Members of the group knew that these barbel had a taste for a most unusual bait—Sausage!

Why these Thames barbel should enjoy a feed of "bangers" will always remain a mystery, for



One morning's fishing with sausage bait produced only two fish—this 8 lb. barbel and 1 lb. 1 oz. roach.

although a lot of garbage finds it way into the stream, it is most unlikely that the people living in the houses at the top end of the stretch, or anyone else for that matter, threw sausages away in large numbers. Nevertheless, as we were to find out later, the fish (roach as well as barbel) had definitely required a taste for sausages and seemed to prefer them to all other baits. It was obvious that a fair number of sausages must have been thrown in or used as bait by anglers, but their origin will always remain a mystery.

The tackle used was fairly heavy —powerful rods, 8 lb. lines, ¼ ounce leads and No. 4 or 6 hooks. The ledger was stopped about 8ins. from the hook, which was baited with a piece of beef sausage about 1¼ins. long. To get the sausage to the right consistency it was first skinned and then dipped in boiling water for ten or twenty seconds.

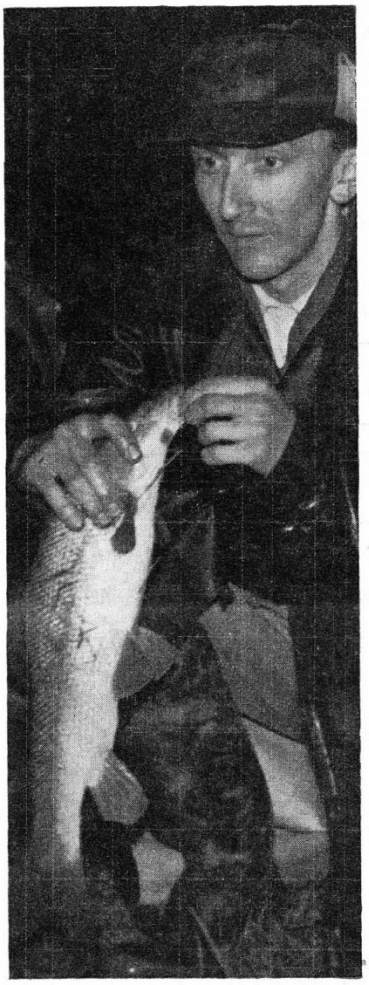
Armed with this strange bait the party concentrated on their chosen spot and, on their sixth visit, one of them—which happened to be me —had a bite, struck, and after a hectic battle amongst the lilies netted a six-pounder. Success for sausage!!

Since then at least three more useful barbel have been taken on the same bait—one by Bob Mayo, another by myself, and the third, a good fish of 8 lb., by Paul Goss.

This little stretch of water is not the sort of place where large bags of fish are caught. Every fish landed represents hours of patient waiting. In my own case, many, many hours were spent without a bite of any sort. In fact, since the season started I have only had three bites that I can definitely say were from barbel. It is real specimen hunting.

There were, however, other fish that found "bangers" to their liking. One of them, a nice roach of 1 lb. 11 ozs., was caught by Paul Goss on the same day that he had his barbel. And in addition to good-sized bream, chub and eels. I have had dace up to ½ lb.—all on size 6 hooks, and 1¼ins. of beef sausage!

The variation in bites was most interesting. I always like to hold the rod in my hand when fishing—the only exception being when using lob worms. With lobs you usually have to wait for a second pull before striking, which gives you a chance to grab your rod from the rest. Both my barbel bites were, however, very finicky, and had I not been holding my rod in my hand and watching it very carefully I would never have seen either of them.



The author unhooks his first barbel on "banger-bait." It weighed 6 lb.

Bob Mayo and Paul Goss, on the other hand, had very different experiences. Bob never noticed a movement at all until the rod was nearly pulled along the bank, whilst Paul observed a slight preliminary tap before he experienced a terrific pull. Both their fish—and mine—were well-hooked, by which I do not mean down the gullet but firmly through the lip. It made me wonder—if I had ignored my first finicky bite, would it have developed into a good pull, or did the fact that the fish was correctly hooked through the lip indicate that I had struck at the right time? I am a bit sceptical whether a really big barbel (and that is the one I am after) would whip the rod round, and I intend to experiment on this problem.

I was told before the season started that these Thames barbel are crafty fish and that trying to catch them on heavy gear is a waste of time. The general opinion was that plenty of bites could be obtained on a 3 or 4 lb. line and small hooks, but getting a fish of 6 lb. or upwards out of weedy water was a different matter.

But I think I have proved otherwise. I do not like to see fish swimming around with broken tackle trailing from their mouths, and I also believe in getting fish out in the shortest possible time. That is why I use an 8 lb. line and a 6 hook, which after all is not very large when inside a 6-pounder's mouth.

So far a double-figure fish has eluded us, but it will come I am sure. It is also my belief that the barbel record will be broken on this water, which has already produced fish up to 12½ pounds. And without being big-headed, I am confident that I could land it. My only hope is that on the day the biggest of the big 'uns fancies a "banger" one of our little group is there to olige.

Written and illustrated by

PETER STONE

Your Waterside Companions . . .

by 'TAG' BARNES

The Kingfisher —'Splendour of the brooks'

"THE secret splendour of the brooks"—that was how Tennyson described the Kingfisher. And it is indeed a red letter day when one sees this gaily coloured bird displaying its plumage of brilliant blues greens and reds set off with a white throat and black beak.

More often than not the Kingfisher is only seen in flight, looking like a bright blue meteor as it hustles down the centre of a river or across a lake, but sometimes they can be observed perching on a low branch over a patch of shallow water. This is their usual position when looking for the small fish on which they feed.

They catch their prey by diving head first into the water, and if their aim is straight they grasp the fish across its middle and return to the perch. There they either beat their prize a few times or throw it into the air and catch it before swallowing it head first. They work hard for their food, and from my observations they make many dives that produce nothing.

An interesting thing about Kingfishers is that, like the robins, they are 'territorial' birds. A certain length of water is taken over and any strange Kingfisher entering the 'boundaries' is immediately attacked and chased off.

Their nests are usually smelly affairs composed of regurgitated fish bones situated at the end of a burrow some three feet into the bank. Often a disused rat hole is taken over for this purpose.

During my schooldays I made a hobby of egg-collecting and I remember well the difficulty I had when trying to extract the egg of a Kingfisher from the end of its burrow. I finally overcame the problem by digging down to the nest from the top of the river bank as one would dig out a ferret.

The eggs, numbering six to ten, are glossy white and are to be found in early summer. They take about a fortnight to incubate and the young are hatched naked with comparatively short bills that do not attain their full length until some time after the bird is fully fledged.

From the anglers' point of view they do very little harm on a fishery, but they can become a menace on a fish hatchery. Mr. D. F. Leny, of the Surrey Trout Farm tells me that he lost 400 tiny red (imported) goldfish one summer to a family of Kingfishers.

Apparently ponds are too large to cover with fine mesh netting, and if large-mesh nets are used the birds simply dive in and out at will. Fish breeders have to keep a continual look-out and discourage the birds as soon as they are seen.

Kingfishers are friendly creatures and, although it has never happened to me, will sometimes perch on the rod of an angler sitting quietly by the waterside. If it should happen to you, keep as still as you can and make the most of it, for rarely will you be privileged to see a prettier and more colourful picture.

Fisheries report

River Trent	Work done	Sept date
Handsacre	Strimmed and trimmed trees around pegs	29
River Severn		
Deerhurst	Put up signage to mark start of BAA fishery,strimmed and cut back trees around	17
Stanley	Burned branches cut from trees around pegs during previous visits.	24
River Avon		
Pershore R & LB	2nd summer cut-back	1
Fladbury	2nd summer cut-back	1
Salford Priors	2nd summer cut-back	3
Pensham	2nd summer cut-back	8
Cleeve Prior	2nd summer cut-back	17
Lower Moor	Dug pegs, cut back trees and strimmed.	22/29
Swifts Water	2nd summer cut-back	24
Pools		
Nordley 1, 2, 3, 4 & 5	Cut back trees around pegs.	1, 3 & 8
Walcot East	Strimmed, trimmed trees and cleared weed from lake around pegs	10
Uckinghall	Cut back trees around pegs.	15
Stubbs	2nd summer cut-back	17
Coppice	2nd summer cut-back	17

Wick

The EA has carried out repair and reinforcing work on the river bank at Wick in part of our fishery downstream of the weir and lock. This has increased the height of the bank making fishing in the area more difficult.

Readers' letters

If you have any items, thoughts, issues you want to air in the BAA news, please email it to baajnw@btinternet.com titled for attn of BAA News Editor.

When sending in a comment can you please let us know if you don't want your name included?

The Editor will act as moderator for items to be included.

Hi,

Just thought I would drop you a line and some photos.....



Went for a session on the BAA Broadwas stretch of the Teme last Sunday, and this is what I found - empty crisp, snack and biscuit packets, two empty bottles of soft drink, empty luncheon meat tin, empty ground bait packet etc., etc., plus a couple of blue carrier bags that I assume all this stuff was carried down to the river in. I would estimate that when all these various containers were full and unopened, the whole lot would have weighed around 4-5lb. After I had collected it all up and put it all in one of the carrier bags - it weighed about 6oz. Which proves my point that the SCUM that left all this litter are so THICK, STUPID and uneducated IDIOTS, that they can't even figure out that IT IS EASIER TO TAKE YOUR RUBBISH HOME THAN IT IS TO CARRY IT TO THE RIVER BANK.

Paul Archer

Rant over.

I would like to know if there is any reason why there are no obvious fishable pegs downstream from the colliery bridge at Alveley? I know this is a great stretch of water and from the evidence of no visible dug out pegs wondered why it so obviously not used by BAA members?

Ed; in one word access. Parking is in the Alveley Country Park car park with a long walk down hill to the river and a hard walk back up hill on return to the car park. When the Fisheries Team visit they have to get permission from Alveley Country Park to take their vehicles down to the river bank with all their equipment.

The baa is a joke every match I fish we hav to clear our pegs first the money people put in and wot do you get for it nothing it's a joke went to mythe the other day and ther r 6 pegs wot a joke

Ed; Fisheries prioritises cutting back our river venues that have matches booked at them before the first match is fished at the start of the season, we have also started to revisit some of our river fisheries for second haircuts. This is in addition to all our other river fisheries that we visit during the summer. If you fish a match when the vegetation has started to re-grow then it is up to you to re-cut out your swim, as Fisheries cannot visit every venue prior to each match fished to give it a haircut.

Given that there are, at best, 10 regulars in the fisheries work party and over 6000 pegs on BAA waters, I reckon, on average, each work party member has to cut out at least 600 pegs per season. Perhaps you would like to volunteer or would like us to employ contractors and see membership fees at least double.

Fisheries does not do any maintenance on our canal fisheries that is down to Canal and River Trust (formerly British Waterways).

Match Reports

If you want to report the results of a contest you have organised on BAA waters, please email details.

Cradley Heath Labour Club **Sunday 14th September** **Bolehall, River Anker**

		lbs	ozs	
1st	John Babbington	5	0	Peg 11, small fish to stick float and maggot
2nd	Steve Robson	4	15	Peg 3, as above
3rd	Lawrie Mulheron	3	10	Peg 1, as above

Report from - Lawrie Mulheron

It proved a tough match with the river desperate for some rain to freshen it up with the river hardly moving on some pegs.

Have Your Say In Our New Online Survey

Make your views known on the angling issues that matter in our online survey at www.anglingtrust.net/membershipsurvey

We'll publish the results in November and use them to prioritise our work over the coming year. Please forward this email to a friend so they can participate in the survey too.

Angling Trust in The Independent

The Independent on Sunday reported our efforts to raise awareness of poaching and fish theft and work more closely with the police to support the Environment Agency. Read the article on The Independent website HERE.

Fungus Released to Control Himalayan Balsam

Not-for-profit research organization, CABI, will be releasing a selective rust fungus at locations in Berkshire, Cornwall and Middlesex as part of field trials to control the non-native, invasive weed Himalayan balsam (using natural methods). This plant can exclude all other vegetation on river banks, leaving them exposed to erosion in the winter. > Read more

I sourced the 8 fact sheets below on River Severn regulation from the Environment Agency website back in 2011. They provide interesting and informative information on how and why minimum water levels are maintained in the river, something which should be of interest to all Severn anglers especially when the river levels rise unexpectedly in a dry period, hope you enjoy. I've recently checked the EA website and the documents appear to be no longer available.

RIVER SEVERN

Regulation fact sheet (1)

Environment Agency

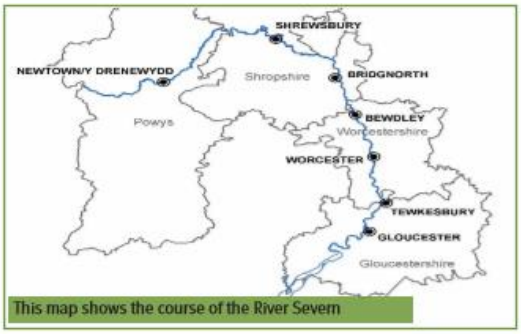
Background to River Severn Regulation

The River Severn is the longest river in Britain. Its source is on Plynlimon in the Welsh Mountains and it flows 354km through Powys, Shropshire, Worcestershire and Gloucestershire before joining the sea at the Severn Estuary, which feeds into the Bristol Channel. Along the river's course, activities can occur which may change its natural flow patterns. For example, people take water from the river for their own use or dispose of treated waste water into the river. The river is managed to ensure that these needs are met without compromising the river's ability to support the natural environment. One way of managing flows is known as river regulation, which is carried out by the Environment Agency. Regulation involves supporting flows in the river with water from reservoirs and groundwater.

River water - a valuable resource

The river flows through a highly varied landscape from the Welsh hills through lowland floodplains towards the estuary. Along the river's course there are many demands for its water.

Most organisations or individuals wishing to use water from a river need an abstraction licence from the Environment Agency. These licences allow the holder to take up to a set amount of water to use for a defined purpose. For example, this could be for public water supply, irrigation of crops, or use in industry.



This map shows the course of the River Severn

How much is too much?

Many abstraction licences today have restricting conditions on them. For example, a licence holder might have to stop taking water when the flow in the river falls below a defined amount. This helps to protect rivers


The river provides an important recreational amenity

when flows are naturally low. If everyone who was allowed to take water continued to do so when flows in the river were low, there would be a risk that the river would dry up completely. This could lead to environmental damage such as fish kills and the destruction of habitats, as well as a loss of amenity value. Placing restrictions on licence holders helps to manage the demand on the river.

In the 1950s it was realised that predicted demands for water from the river, particularly for public water supply, would be greater than the river could support, especially in dry years.

Ways to increase the reliability of river flow were looked at and the results of a survey published in 1960 led to new legislation being passed. This allowed a reservoir near the top of the Severn on the River Clywedog to be built.

This reservoir, Llyn Clywedog, has the primary purpose of storing water to support flows in the River Severn when needed.

RIVER SEVERN

Regulation fact sheet 1

Environment Agency

Further water is available from Lake Vyrnwy on the River Vyrnwy. Water released from the reservoirs is then available for abstraction further down the river without the flows falling too low. Further information about Llyn Clywedog and Lake Vyrnwy can be found on the 'Llyn Clywedog and Lake Vyrnwy' factsheet in this series. When flows fall particularly low, additional water is available to support the river from the Shropshire Groundwater Scheme. This is a series of boreholes from which groundwater can be pumped into the river. Further information about the Shropshire Groundwater Scheme can be found on the 'Introduction to the Shropshire Groundwater Scheme' factsheet.

The river provides important wildlife habitats

Other river users

The River Severn is used widely for recreation. Many anglers, ramblers, canoeists and other boat users regularly use the river and its banks. For these river users it is important that the amenity value of the river is preserved. The Environment Agency does this by supporting flows in dry weather and restricting abstractions.

Long periods of reduced flows can have a bad effect on river wildlife. Habitats can be damaged or destroyed. One of the reasons for regulation of the River Severn is to protect these habitats by keeping river flows above an acceptable level.

The river is also managed to ensure that the tides in the Severn Estuary do not cause damage when flows are low. The estuary has the second highest tidal range in the world. The salty water brought upstream by the tides, and the effect that the tide can have on moving sediments in the river bed, can damage the environment and affect the water taken for public water supply. Any small negative effect in one area can have an influence further up or downstream or on a different species. River Severn Regulation helps preserve the natural balance of the river's ecosystem. Further information about the environmental benefits of this regulation can be found on the 'Regulation of the River Severn and how it benefits the environment' factsheet in this series.

River Severn Regulation usually occurs during the dry, summer months. In wetter weather when flows are high, there is the potential for flooding on the River Severn and its tributaries. Further information about flooding can be obtained from the Environment Agency by calling our Floodline number on 0845 988 1188.

Fact box 1

Reservoirs: These are formed when either a dam is built across a river or the flow is diverted into a storage area. They are a means by which water can be stored for future use.

Abstraction: This is the term for water being pumped directly from a river or via a borehole drilled into groundwater. There are laws governing the abstraction of water and most users need to be licensed by the Environment Agency.

Groundwater: This is water that is found below the ground in cracks and spaces in the rocks and soil. Groundwater could be seen as a naturally occurring, underground reservoir.

Amenity Value: Can include recreational facilities such as locations for water sports, walking and cycling in a pleasant environment.

River flow: This is the movement of water draining from the land out to the sea in river channels. The flow is made up of rainfall draining into the channel baseflow, which is supported in many cases by groundwater and releases of waste water.

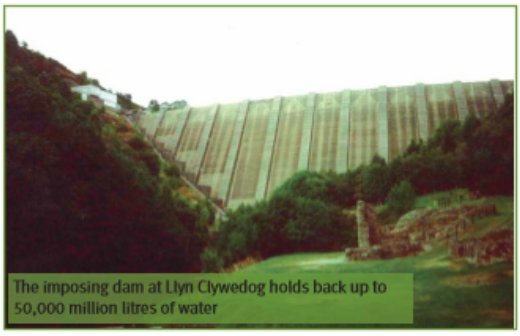
RIVER SEVERN

Regulation fact sheet 2

Environment Agency

Llyn Clywedog & Lake Vyrnwy

Llyn Clywedog and Lake Vyrnwy are artificial reservoirs built on tributaries of the River Severn. Clywedog was built specifically for River Severn Regulation use to support demands for use of river water. Vyrnwy is mainly a water supply reservoir used by United Utilities to supply water to Liverpool, with some water available for river regulation. Both are owned by Severn Trent Water Ltd. The water released from the reservoirs into the River Severn is managed by the Environment Agency working with the water company.



The imposing dam at Llyn Clywedog holds back up to 50,000 million litres of water

Llyn Clywedog

The dam across the River Clywedog near Bryntail is one of Britain's tallest concrete buttress dams. It was built specifically to hold water to be used for River Severn Regulation as a result of an Act of Parliament in 1963. The Act was based on a survey that stated the amount of water that would be needed to support river flows and the most suitable location for the reservoir to store that water.

The location was chosen to take advantage of the high rainfall in the Welsh Hills. It is not uncommon for nearly 2000 millimetres of rain to fall here in a year. This rainfall is stored and released from the reservoir to support the River Severn when required. This is usually during dry weather when the demand for water is high and natural river flows are low.

The dam took three years to build, starting in April 1964. The reservoir began to fill in December 1966 and was full by 1968. It is situated five kilometres upstream from the confluence of the River Clywedog with the River Severn.

Whilst the building work took place, the river was diverted away from the site so that the foundations could be kept dry. Water is released from the reservoir using a number of valves of different sizes. These valves allow accurate control of the output. They are powered using hydro-electric power generated at the dam and are operated from a control building next to the dam. If additional electricity is produced by the discharges of water, it can be sold.

During the winter months, the reservoir is drawn down sufficiently to allow for winter rainfall to be stored. But, if rainfall amounts are high, the reservoir will overspill. This storage can lessen the impacts of flooding on the River Clywedog but has a negligible effect on flooding on the River Severn. This is because many other tributaries join the River Severn in its upstream reaches so the influence of the River Clywedog is minor at high flows.

	Clywedog	Vyrnwy
Area	250 hectares	454 hectares
Length	9.5 kilometres	7.6 kilometres
Capacity	50,000 million litres	59,666 million litres
Dam height	72 metres	43.9 metres
Max. depth	66 metres	25.6 metres

This table compares some of the main details of Llyn Clywedog & Lake Vyrnwy

The reservoir is managed to ensure that it is full in time for summer. A small release is made throughout the year to prevent the River Clywedog from drying up. Larger releases are then made for river regulation or flood drawdown. Much use is made of the reservoir for recreation, with a sailing club and an angling club leasing rights to use the lake. The area is now an important wildlife habitat and a scenic trail is signposted along with other footpaths in the area.

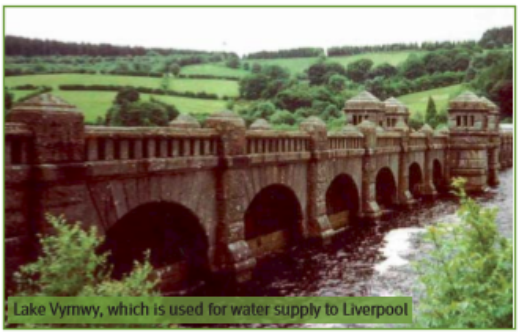
RIVER SEVERN

Regulation fact sheet 2

Environment Agency

Lake Vyrnwy

Lake Vyrnwy was created by building a dam near the headwaters of the River Vyrnwy. The River Vyrnwy joins the Severn at Melverley. An Act of Parliament passed in 1880 allowed the reservoir to be created to provide a water supply to Liverpool. When the reservoir was formed, a village in the valley was flooded and the villagers were provided with new housing nearby. It was the first large masonry dam to be built in Britain and at the time it created the largest artificial reservoir in Europe. The dam was built between 1881 and 1888 and had been filled with water by 1889.



Lake Vyrnwy, which is used for water supply to Liverpool

Like Llyn Clywedog, the location for Lake Vyrnwy was chosen because of the high rainfall in the area. The main purpose for the creation of Lake Vyrnwy was to provide a plentiful, clean water supply to Liverpool. An aqueduct takes the water from the lake to treatment plants in the north west. A minor proportion of the water stored in Lake Vyrnwy can be used to support River Severn Regulation.

Since the creation of the lake, most of the surrounding area has now been forested and is an important wildlife reserve. While recreational use of the reservoir is restricted to preserve the quality of the drinking water supply, bird hides and wildlife trails attract many visitors to the lake.

Other sources of water

In the 1970s, it was realised that the combined output of Llyn Clywedog and Lake Vyrnwy alone would not be sufficient to support the River Severn in dry weather. This was because of increased demands for water use from the River Severn and a number of extremely dry summers, for example, the severe drought of 1976. The search for an additional supply of water began and an alternative to another surface water reservoir was promoted. The Shropshire Groundwater Scheme was developed. A number of boreholes were drilled and the water pumped from them can be piped into the River Severn if required. More information about the Shropshire Groundwater Scheme can be found on the 'Introduction to the Shropshire Groundwater Scheme' factsheet in this series. This scheme is managed in conjunction with Llyn Clywedog and Lake Vyrnwy to ensure that flows on the River Severn are maintained.

Fact box 2

Reservoirs: These are formed when either a dam is built across a river or the flow is diverted into a storage area. They are a means by which water can be stored for future use.

River flow: This is the movement of water draining from the land out to the sea in river channels. The flow is made up of rainfall draining into the channel baseflow, which is supported in many cases by groundwater and releases of waste water.

Aqueducts: These are like pipelines because they are used to transport water from one place to another. Aqueducts are built above ground, often like bridges, and carry water in a channel rather than a pipe.

Groundwater: This is water that is found below the ground in cracks and spaces in the rocks and soil. Groundwater could be seen as a naturally occurring, underground reservoir.

RIVER SEVERN

Regulation fact sheet 3

Environment Agency

Management of River Severn Regulation

Regulation of the River Severn balances the needs of water users with the protection of the environment. This balance is managed by the Environment Agency in liaison with water users, to ensure that the river and the estuary are protected from damage resulting from low flows.

Controlling the flow

The Act of Parliament which allowed the creation of Llyn Clywedog also set down a minimum flow to be maintained at a control point at Bewdley in the middle reaches of the River Severn. The minimum flow was originally defined as 720 million litres a day (Ml/d) to ensure dilution of waste water discharges from the Black Country and to allow for abstractions and environmental needs downstream. This has now been changed to a five day average minimum flow of 850 Ml/d and a daily minimum flow of 650 Ml/d. This is to ensure that flows in the lower reaches of the river are held at a reasonable level while allowing for occasional, unavoidable daily reductions in flow.

There are several stages in regulating the River Severn. Firstly, flows at Bewdley and several other strategic sites are monitored daily to check how flows in the River Severn are changing. The flows are monitored remotely using telephone links to measurement sites on the river. These gauging stations provide information about flows at the site. In dry weather, a pattern of decreasing flows will become apparent.

The gauging station at Bewdley where flows on the River Severn are monitored

As the average flow at Bewdley approaches 850 Ml/d, a River Severn Regulation Alert is issued. This is a letter to water companies, British Waterways and other interested parties warning them to prepare for any restrictions that may be placed on them during regulation. The letter states that regulation releases may be required from Llyn Clywedog in the next fortnight.

Supporting the river

Increased flow monitoring takes place during a Regulation Alert. Actual and proposed water use information from the water companies and other major users, such as Ironbridge Power Station, is analysed. This data is used to forecast when flows are likely to fall below the 850 Ml/d minimum flow at Bewdley. The forecasts are based on current trends, historic flow patterns, predicted abstractions and weather forecasts. When it appears likely that the minimum flow will be reached, releases are planned from Llyn Clywedog to support the flow.

The timing of the release is based on knowledge of current flow rates and the fact that water from Clywedog can take around four days to reach the control point at Bewdley. For this reason, planning of releases and co-ordination of abstractions is essential.

Maintaining the minimum flow at Bewdley is difficult. There are many factors that cannot be controlled such as the weather, or unplanned pumping from the river. For example, farmers using river water to irrigate their crops may take more water on some days than others meaning that flow predictions are not always accurate.

The amount of water released from the reservoirs is based on water users' requirements and how low flows are expected to fall. A balance needs to be reached at around 850Ml/d.

The maximum release that can be made from Llyn Clywedog for river regulation purposes is 500Ml/d. In addition, regulation releases can be made from Lake Vyrnwy. The main purpose of Lake Vyrnwy is to provide public water supply, so the contribution made to River Severn Regulation is limited, with only around 10% of the total storage at Lake Vyrnwy allocated for river regulation.

RIVER SEVERN

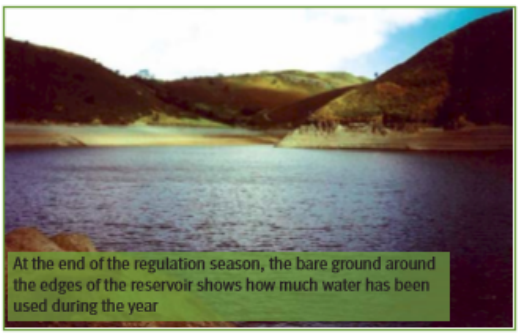
Regulation fact sheet 3

Environment Agency

The travel time of a release of water from Lake Vyrnwy to the control point at Bewdley is about two days so it is shorter than that from Llyn Clywedog. This means that water from Lake Vyrnwy can be used if a short term flow adjustment is required. The water can also be used to support the river in the event of maintenance work taking place at Llyn Clywedog, which limits the ability to make releases.

Planning for success

A series of control points are defined on a graph of reservoir level through the year to assist in the management of Llyn Clywedog. These show whether the remaining reservoir capacity is sufficient to support the river should dry weather continue. If not enough water remains, the Shropshire Groundwater Scheme can be used. This groundwater is used in a very similar way to the water from the surface reservoirs. The amount of water required is determined by assessing rates of water use, flow patterns and other releases. Water will then be pumped from the boreholes and put into the river to support flows. Further information about the Shropshire Groundwater Scheme is available on the 'Introduction to the Shropshire Groundwater Scheme' factsheet in this series.



At the end of the regulation season, the bare ground around the edges of the reservoir shows how much water has been used during the year

Whilst the timing and quantity of reservoir releases is important for successful management of the River Severn, close liaison between the Environment Agency and the major water users is essential. If it is unlikely that releases of water alone will maintain the minimum flow at Bewdley, Severn Trent Water and the South Staffordshire Water will assist by modifying their abstraction patterns from the River Severn. South Staffordshire Water have a small reservoir next to the river at Hampton Loade. Water for supply can be taken from there if the river abstraction is restricted.

The management of River Severn Regulation requires careful monitoring of relevant data and close liaison between the Environment Agency and water companies to ensure that the environment does not suffer as a result of demands for water supply.

Fact box 3

Abstraction: This is the term for water being pumped directly from a river or via a borehole drilled into groundwater. There are laws governing the abstraction of water and most users need to be licensed by the Environment Agency.

Reservoirs: These are formed when either a dam is built across a river or the flow is diverted into a storage area. They are a means by which water can be stored for future use.

Groundwater: This is water that is found below the ground in cracks and spaces in the rocks and soil. Groundwater could be seen as a naturally occurring, underground reservoir.

RIVER SEVERN

Regulation fact sheet 4

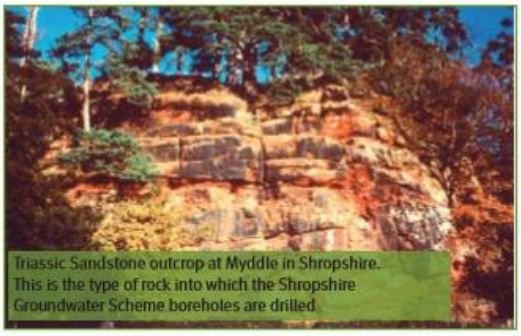
Environment Agency

An introduction to the Shropshire Groundwater Scheme

The Shropshire Groundwater Scheme is a vital component of River Severn Regulation where flows in the River Severn are artificially supported during times of low flow. The scheme is made up of groups of boreholes, which draw water from groundwater reserves naturally stored within the sandstone underlying much of North Shropshire. This water is pumped out and released to the River Severn to enhance flows in the river.

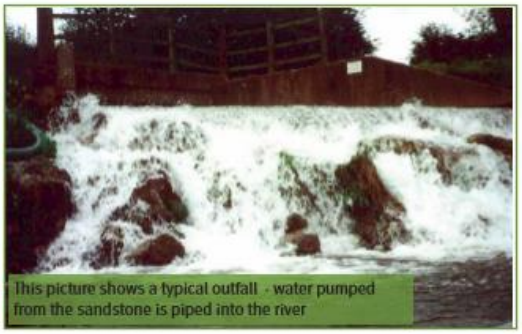
Support for the river

When flows in the River Severn start to fall additional water is released into the river from various sources. This allows water users to continue taking water from the river, and protects wildlife habitats. Initially, water will be released from Llyn Clywedog and Lake Vyrnwy, reservoirs in the headwaters of the River Severn catchment. If the low flows continue for a long period, there is not enough water in these reservoirs to maintain the required releases. In the 1970s, predictions of demand for water use from the River Severn showed that there was a need for a further source of water to support flows in the river.



Triassic Sandstone outcrop at Myddle in Shropshire. This is the type of rock into which the Shropshire Groundwater Scheme boreholes are drilled

At the time many options were considered including the use of groundwater. Much of North Shropshire is underlain by sandstone aquifers. These hold a lot of water and so act as a natural underground 'reservoir'. The supply is topped up following rainfall when some water will drain through the soil to be stored in the rocks below. A very large amount of water is stored in these rocks and the amount of rainfall received in the area is also generally quite high. This means that the aquifer provides a sustainable resource.



This picture shows a typical outfall - water pumped from the sandstone is piped into the river

A suitable alternative

Studies were carried out over several years to confirm that this alternative to a conventional reservoir was feasible. As a result, formal approval for the development of the Shropshire Groundwater Scheme was given in 1981. Advantages of the scheme included that it costs only a fraction of the price of a traditional surface water reservoir and, that it does not require large amounts of land to be flooded and has a minor visual impact.

Large diameter boreholes are drilled deep into the sandstone. The boreholes are then pumped and the groundwater is delivered through buried pipelines either directly to the River Severn or via the Rivers Perry, Roden or Tern.

Like any other water user, the Environment Agency has an abstraction licence that allows the drilling and pumping of the Shropshire Groundwater Scheme boreholes.

RIVER SEVERN

Regulation fact sheet 4

Environment Agency

The licence contains conditions which state where the boreholes can be drilled and exactly how much water can be pumped from them. The licence also states that the scheme can only be used for the purpose of supporting flows in the River Severn when the water stored in Llyn Clywedog cannot meet the expected demand for water.

Staged development

The scheme comprises six development areas allowing the construction of up to eight phases. This flexibility allows the scheme to be tailored to match rising or falling water demands. This means that boreholes will not be drilled before the need for them is justified. If demands for water from the River Severn increase, more boreholes can be drilled. However, if demand falls as water is used more efficiently, the additional boreholes will not be required. At the current time (2009), four out of a possible eight phases of the scheme have been developed with the fifth phase underway.

Before the decision was taken to go ahead with drilling the boreholes, investigations were carried out to see what impact pumping the groundwater might have. This monitoring continues now the scheme is in place and includes checks on water levels in observation boreholes and pools, as well as, analysis of water quality and wildlife populations. This is to ensure that the scheme has a minimal environmental impact.

Water samples are routinely taken for testing when the scheme is in operation

The Environment Agency has put in place safeguards to protect any other water users in the locality who may be affected by the scheme. For example, if pumping from the Shropshire Groundwater Scheme boreholes causes water levels in a nearby well to fall causing a problem for users of that well, the Environment Agency will provide an alternative supply of water. Any water users who are potentially at risk from impacts of the scheme are identified during the initial construction of each phase of borehole development. This means that problems are identified in advance of them occurring and solutions can be put in place.

Building for the environment

Each construction phase of the Shropshire Groundwater Scheme is a major civil engineering project. The Environment Agency is committed to using best environmental construction practices including, where possible, the use of recycled materials. Around each borehole, a pumping station is built. These are designed to have a minimal impact on the local environment and include features to encourage wildlife, for example, bird nesting boxes and fruit bearing plants.

The Shropshire Groundwater Scheme is designed to be used, on average, once every three years to meet peak dry weather demands for water. Even then the scheme is pumped in short bursts for up to a maximum of 100 days in any year. In addition, the scheme is licensed to be used for approximately 250 days in any five year period. To date, the additional flow support to the River Severn provided by the scheme has been used in 1984, 1985, 1989, 1995, 1996 and 2006.

Fact box 4

Groundwater: This is water that is found below the ground in cracks and spaces in the rocks and soil. Groundwater could be seen as a naturally occurring, underground reservoir.

Reservoirs: These are formed when either a dam is built across a river or the flow is diverted into a storage area. They are a means by which water can be stored for future use.

Aquifers: These are rocks such as sandstone, which can absorb a lot of water. The water held in aquifers moves, sometimes very slowly, towards a river channel where it emerges to contribute to the flow in the river.

Abstraction: This is the term for water being pumped directly from a river or via a borehole drilled into groundwater. There are laws governing the abstraction of water and most users need to be licensed by the Environment Agency.

RIVER SEVERN

Regulation fact sheet 5

Environment Agency

Regulation of the River Severn and how it benefits the environment

The main aim of River Severn Regulation is to ensure that flows in the river do not fall too low and damage the river's environment. This has been a danger with increasing demands to use water from the river. Regulation ensures that the balance between the amount of water flowing downstream and the amount taken out by water users is kept at a level that does not cause environmental damage.

Balancing the environment

During dry weather when there is little rainfall to increase river flows, baseflow from groundwater will make up the majority of the water in the river. However, at these times, demands for water increase so that abstraction rates from the river are higher. One reason why the demand for water from the River Severn is so high is that the water quality is good. That is also why the river supports such a wide diversity of wildlife.

Water is released into the river from alternative sources such as surface and groundwater reservoirs, to maintain flows as part of river regulation. If flows were allowed to drop too low, wildlife habitats would be damaged or possibly destroyed.

This is particularly the case in the Severn Estuary, which supports a wide range of habitats. If too little water is flowing in the river, the estuary and associated wetlands will dry up affecting the insects, animals and birds that live there. The minimum flow at the River Severn control point at Bewdley has been determined to ensure that sufficient water flows downstream to the estuary to maintain the health of the river and its environment.

Low flows can also be a problem in the upper reaches of the River Severn. As the control point at Bewdley is quite a long way downstream, the flow in the upper reaches can be low before the effects are felt in the middle reaches of the river. In response to this, monitoring of the river at Dolwen, near Newtown, has recently become part of the River Severn Regulation management procedures. The aim is to preserve a flow of around 70 million litres a day (Ml/d) at Dolwen to ensure that wildlife habitats in the upper reaches are protected.

The River Severn supports a wide variety of wildlife and the Environment Agency is actively protecting and improving their habitats

The Severn Estuary

The Severn Estuary experiences the second highest tides in the world, with a tidal range that can exceed 14.5 metres. Very high spring tides occur on several days in each lunar cycle. When flows in the River Severn are low, these spring tides can have a greater effect on the river, which can lead to some environmental concerns.

Firstly, sediments that are deposited in the upper Severn Estuary can be lifted from the bed of the estuary and moved back upstream as the tide carries them in. This increases the demand for oxygen in the river and reduces the oxygen that is available for fish. In the worst cases this can cause fish deaths.

Secondly, the tidal water moving upstream can affect water users as the water becomes more salty or contains too much sediment.

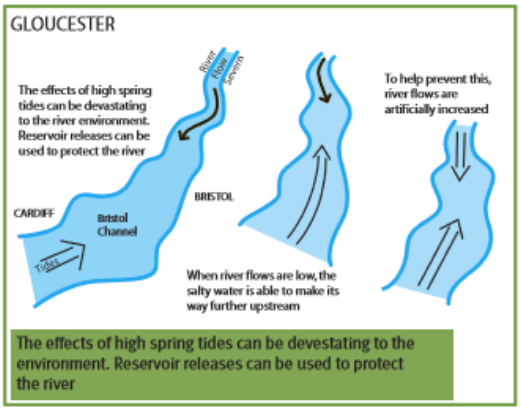
One way of reducing these impacts is to artificially increase the river flows in a similar way to River Severn Regulation. However, to combat the tidal effects, flows need to be much higher than those required to protect the environment and abstractors during dry weather.

RIVER SEVERN

Regulation fact sheet 5

Environment Agency

Llyn Clywedog is the major source of supply for the water used for River Severn Regulation. Owing to its location in the Welsh Hills where the rainfall is high, it is unlikely that the reservoir would not be refilled over the winter. This means that if, at the end of a summer period, there is surplus water available that was not required for normal regulation releases, this water could be released to combat tidal influences on the river. The same is true of Lake Vyrnwy and the Shropshire Groundwater Scheme, although the amount of water available is likely to be smaller.



The effects of high spring tides can be devestating to the environment. Reservoir releases can be used to protect the river

The maximum releases that the Environment Agency is allowed to make from Llyn Clywedog and Lake Vyrnwy for river regulation purposes are 500 Ml/d and 405 Ml/d respectively. These maximum releases can be of great benefit at a time when the natural river flow measured at Bewdley is much lower than that. Such a large release of water from Llyn Clywedog can create ideal white water conditions near the dam that canoeists will take advantage of whenever possible.

The timing of the reservoir releases needs to be carefully controlled to ensure that the water reaches the estuary at the same time as the high tide. The upper reaches of the river near the reservoirs also need to be protected from sudden changes in flow speeds that could affect wildlife. In addition, reservoir water may be at a cooler temperature to the water in the river. This means that a large release of water could have an impact on the fish and other wildlife in the river. These factors mean that a considerable amount of planning goes into these special reservoir releases to ensure that the maximum environmental benefit is gained and habitats are not damaged.

Fact box 5

River flow: This is the movement of water draining from the land out to the sea in river channels. The flow is made up of rainfall draining into the channel baseflow, which is supported in many cases by groundwater and releases of waste water.

Groundwater: This is water that is found below the ground in cracks and spaces in the rocks and soil. Groundwater could be seen as a naturally occurring, underground reservoir.

Abstraction: This is the term for water being pumped directly from a river or via a borehole drilled into groundwater.

Reservoirs: These are formed when either a dam is built across a river or the flow is diverted into a storage area. They are a means by which water can be stored for future use.

Tide: These can affect river flow in estuaries, where the river meets the sea. As the tide comes in, it can force the river flow to be held back, or in some cases reversed so that the river flows backwards. As the tide goes out again, the river flow returns to normal. The tidal range is the difference between the water level in the estuary at high tide and at low tide. In the Severn Estuary, this difference can be around 14 metres.

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