



Virtual Fisheries Forum 24/05/2022 (Water Quality Monitoring Network Launch).

Q&A session

Q. Our lake is in the Norfolk Broads area and as such is acidic due to the peat bed. We take regular D.O meetings. Should we buy a Ph meter and if so can you suggest make/model and what readings should we look for?

A. (Kris) This is something I would advise to discuss with your local fisheries officer at the Environment Agency or even the [Angling Trust Fisheries Management Advisors](#).

It is worth saying the focus of the water quality monitoring network (WQMN) is upon rivers for 2 reasons. Firstly, rivers are where the greatest issues are being seen with point source and diffuse freshwater pollution and secondly, protecting legislation and regulation of pollution of rivers is the weakest and as such needs scientific/public pressure to improve.

Q. How much was the cost of the equipment again?

A. (Kris) £113 as it stands currently for the all-inclusive kit and that includes supplies to test for 2 years at the frequency we recommend. The only other thing required are a vessel to collect your water sample with such as a bucket or bottle etc. If clubs are struggling to fund the kit and they are Angling Trust members contact me and there may be access to some more funding to further cushion the expense.

Q. Could more financial support be sourced from other major tackle companies?

A. (Kris) Yes, in a broader sense than just this WQMN the Angling Trust in recent years have worked to seek relationships with as many major tackle companies and trade brands as possible to support our work across the board. Hopefully we will get even more support in the near future. Ideally, we would want to supply the equipment for the WQMN

free of charge but unfortunately our current funding position is not yet in a place where that is possible. In some ways I think the fact the equipment still has to be purchased ensures that the monitoring is taken seriously by those who get involved so nobodies' commitment is wasted.

Q. On the slides it said about looking to get angling clubs involved. We used to be a club that's changed to a Day Ticket venue. Would we be able to get involved? We are river fed and Northamptonshire based. Kettering to be precise?

A. (Kris) I do not see any reason why you couldn't be involved. The reason we prioritise working this WQMN with angling clubs is firstly because we are assured that their volunteers have proper rights of access to the waterways and secondly angling club members are covered by some form of public liability insurance (Angling Trust member clubs will have sufficient public liability insurance for definite to cover volunteer activities such as water sampling). If you are a day ticket water then you will also have rights of access and if you are Angling Trust members you will also be covered by our public liability insurance so I cannot see any issues why you couldn't come aboard with the scheme.

Q. How is data recorded and shared?

A. (Kris) With any citizen science type activity the gathering of data is the big challenge. With the WQMN we hope to have at least 50 clubs involved in the first year with potentially 250+ members participating. With the WQMN we are using an app called "[epicollect5](#)" which is free to download from the appropriate app store for your device. There is no charge to the Angling Trust or the Volunteers for using it. You do not need to be online to record data, this can be done in the field without signal or wifi but then uploaded properly later once you are connected to a network again. We will compile the nationwide data and use it in our campaigns to ensure that groups such as the government, NRW, polluters etc know that anglers are out there monitoring the water quality and identifying the problems demanding action from those accountable/responsible. We do not want this to just be an AT dataset. This data will be accessible by all volunteers who collect it across the network, any clubs who sign up to the network can obviously view the data and any other organisation such as rivers trusts etc can have access to the data. The more people that have access/use the data to campaign

the better. You may be aware that the Rivers trusts were awarded a substantial sum of money by the government for organising what is called the catchment monitoring co-operative which is an initiative to harness all the data being produced nationally for water quality which would include the data being collected by our WQMN as well as any data from other stakeholder groups. Once this co-operative comes to fruition everybody's data becomes very valuable to see where the key pollution issues are across the board, not just for fish and fishing.

Q. Could you present data from the Pilot Study? What has already been collected?

A. (Kris) We launched 2 weeks ago and the data collected so far is insufficient to present with any meaning due to being a small number of samples from a handful of locations but it is freely available to anyone who does currently wants to see it. Hopefully over the next few weeks the increased data collection momentum from people getting on-board will generate a wider data network geographically and when we have around 1-year worth of data records a clearer picture will show. The Wye Salmon association have been collecting data in similar fashion for years and they say after around 2 years of collection records that is when the datasets come to life. People will obviously say we cannot wait 2 years to take action and rightly so. As a result, where clubs are seeing worrying results, we will be encouraging those clubs to be proactive with flagging up their findings to us. The aim is to put all the information out into the public domain regardless of whether the collected data trends at the various sites support our campaign position.

Q. Hi Andy here. I live in the South of Scotland and we have similar river pollution issues from agriculture, can I join in? I note that Siltation is not measured by the AT testing. Is there any plan to include this metric?

A. (Kris) Yes, sadly the Angling Trust does not cover Scotland but saying that is people in Scotland want to know about the scheme and all its details/methodology I am very happy to share that information. I would love to be able to include Scottish angling clubs, but the funding of the Angling Trust doesn't accommodate for that area.

Q. Besides from the Phosphates and Nitrates parameters mentioned in the presentation is there any other substances the WQMN will be testing for?

A. (Kris) Obviously in the presentation I mentioned there is potential for a vast amount of different pollutants to enter our river systems, but we cannot feasibly provide tests for everything within our budgets, so we have opted for the parameters which science tells us are the most widely indicative of point source and diffusion pollution which pose a threat to both fish and fishing. The most important substances to monitor depend very much on your background/motivations for example wild swimmers will likely be more concerned with substances such as presence of E-Coli as these directly impact their favoured recreational activity whereas for us anglers it is the fish. If there were a few clubs who are very keen to record other substances such as Ammonia for example then we can discuss this and I will be happy to adapt our data collection templates on the epicollect app to accommodate this. Time is another consideration because we do not want to create a testing process which takes a long time as this will deter people from wanting to do it assuming many who would volunteer are anglers taking the samples during their fishing sessions. The methodology as it stands takes around 15-30 minutes depending on how well practiced you are with doing it and this I think is about the sweet spot for not being too obstructive to anglers doing this before/after their fishing. Another thing which could be asked is why we have selected the equipment to measure the WQ which we have in terms of the actual models. We are trying to provide a reasonably accurate picture of water quality in a way which anglers can do and is affordable within our budgets. The Environment Agency still are obligated to test water quality in rivers and obviously their laboratory methods will be much more accurate than the apparatus in our WQMN but we are not trying to completely replace the Environment Agencies role of monitoring the water quality. Our network will simply assist them by pointing them in the direction of where the problems are to speed up the regulatory response.

Q. How will the success of the WQMN be judged? Will it be data collection or action to solve the problems?

A. (Kris) We are not undertaking this exercise to just build up a huge amount of information and data. Data in itself is not enough. We need to use the data to apply pressure and press for solutions to where the problems are. Ultimately having our rivers water quality improved across

the board is how the success will be gauged. Also, how well the AT can use the data at a national level to lobby the government and influential stakeholders to bring about positive change.

Q. Are the technical specs of the tests and the protocol adequate to convince EA and water companies that our results are meaningful?

A. (Kris) If you talk to the EA on a national level, they will say they cannot use citizen science data which asks the question why are we bothering with this. The reason this top-down EA position on citizen science exists is because they have to monitor/regulate environmental quality and also enforce/prosecute against those who cause damage. For the EA to be able to prosecute polluters they need to have a set of data which will stand up to criticism in court which is why the data procedures they go through to test water quality at this level are lab based and comprehensive. The EA perhaps do not understand that data and information for standing up in court is not the only way in which it can be used, particularly for public opinion and people are now very aware of the amount of pollution incidents nationwide. We are now starting to see a change of viewpoint from the EA where this kind of citizen science is better received for informing their investigative and mitigative work. With the combination of many well organised stakeholder groups monitoring water quality with consistent methodology and applying pressure such as the wild swimmers, rivers trusts, paddleboarders etc the EA cannot ignore citizen science like they have previously. In fact, the broad spectrum of different groups monitoring different aspects of environmental quality depending on what is relevant to their specific activities is a very useful tool to pinpoint where the problems are. We are having a meeting with senior EA representatives next week specifically to discuss our WQMN.

Q. The West Country Rivers Trust also has a voluntary river monitoring programme. Are you sharing data with them?

A. (Kris) In the case of the WCRT they are doing such a thorough job at monitoring water quality of rivers in their region the need for this to be done by angling clubs through our WQMN is vastly reduced. We will be sharing all data as said earlier and making active effort to communicate with other stakeholder groups to ensure there is minimal duplication of activity going on. Our intention is to work with people and not to replace

them. This also maximises efficiency of our resources to cover as many river systems as possible with citizen science monitoring.

Q. Are there likely to be any conflicts with the Riverfly and Smart Rivers schemes That collect and count invertebrates?

A. (Kris) I cannot imagine how there would be any conflict. The only thing which could be a conflicting impact is the limited number of people willing to get involved with such citizen science activities and obviously working people volunteering their spare time will likely be unable to commit to everything no matter how much they may support the cause. As far as the works all going on from these projects, they are complementary of each other.

Q. Are there materials in the kit to relate the readings we get to water quality standards?

A. (Kris) Yes there will be guidance on what constitutes acceptable water quality standards for the parameters where this is possible to state but every river is different so looking at measurements in isolation is difficult to make much conclusion of which is why repeated frequent data is key. It is also worth consulting with the local EA fisheries officers about what is a normal/expected reading for the geographic area in question.

Q. Can you clarify who will be covered under the Insurance cover provided by the Angling Trust?

A. (Kris) On the [AT insurance website](#) there is a comprehensive list of what is covered by the various AT insurances. My understanding is that Angling Club Members of the AT automatically receive the benefits of our £10M limited public liability insurance and will be covered for water sampling/testing activities by this.

Q. We have two sections of the River Colne. do need to test each section separately and if so, will we need two kits?

A. (Kris) The way to make the kit go further is for clubs to share 1 or a sensible number of kits between the different sites on their river of choice either with 1 volunteer testing all the sites or coordinated sharing of the kit between multiple volunteers to cover the ground. The kits contain enough testing consumables to test 1 site every month for 2 years but obviously the consumables will be used up more quickly if

these kits go further than just 1 site which would increase the cost of monitoring for yourselves in replacing the consumables more frequently. The consumables are around £30 for another 2 years supply so not a huge financial burden. If any clubs want to discuss their individual financial commitments to getting involved with the WQMN drop me an email and I can break it down for you based on what/how you plan to monitor.

Q. will the sampling locations be selected by locals or AT, or in combination? on what criteria e.g. I am concerned about a local STW, so would favour an above and below comparison?

A. (Kris) A combination of both. Angling clubs can only test on their waters, and they are best placed to judge where they think testing would be most beneficial on their water as they know it best. However, some guidance/criteria is needed to be followed to inform angling clubs decisions for removing duplication issues and poor scientific practice. For example, measuring immediately within or below a sewage treatment works outflow would give a false representation for the river's water quality as there has not been sufficient chance for dilution to occur with the main flow of river water. It is much more informative and representative to take readings say a hundred yards above and below an inflow to gauge its potential impact on river water quality as a whole rather than just the one outflow spot.

Q. How is the data going to be comparable? Plus how long will you keep collecting and storing the data?

A. (Kris) All volunteers have the same kits, follow the same methodology plus receive the same training, as well as logging all the data into epicollect where it is accessible/comparable by all. You will always get a bit of variability between users, but we have done everything we can to ensure repeatability and comparability. As for how long we will collect/retain the data, this is not just limited to the initial 2 years and will hopefully continue much longer as long as we have the volunteer base to make it viable. One important thing to note is that once we have accumulated a substantial and comprehensive archive of data we will look to recruit a university student to conduct a thesis analysing it.

Q. You mentioned that you had started monitoring the River Severn and its tributaries. Were the phosphate levels found to be high on the Rea brook and River Severn?

A. (Kris) Far too early to say from the data collected so far by the WQMN pilot.

Q. Has AT spoken to the water companies about their testing regimes for river waters? Affinity Water tests for both phosphates and nitrates but not for the chemical suites the consultative is testing for on the River Colne, although admittedly the suites could not be tested on the riverbank. The comparison between the water company readings and AT readings might prove interesting.

A. (Kris) I did mention in my presentation that the water companies now self-monitor but given they refused to admit they were breaking the law discharging raw sewage into our rivers despite ongoing hard evidence this was the case people are rightfully cynical of their self-monitoring. I have spoken with some water company rangers on the Severn who take samples and said I'm happy to work with them sharing our WQMN data for comparison so long as it is reciprocated.

Q. What are the chances of the EA themselves getting involved in the WQMN?

A. (Kris) Who knows what will happen in the future. As I said earlier, we have not entered this campaign on the basis of doing it for the EA nor have we explicitly involved them in its development. They are aware it is happening hence our meeting with senior representatives next week. I would hope that the EA engage with it and help/support angling clubs with interpreting their results for the specific geographic regions and river catchments that will be monitored. The Angling Trust does not have the resources to utilise the results at a local level for every angling club and river/stream volunteer group individually so the EA's help/engagement at local level would be a tremendous asset, not just for our WQMN but all the citizen science water quality/river health projects going on. I would also hope the EA engage with the Angling Trust on a national level to look at the overall results for making progress towards healthier rivers but if they do not the AT will still pursue that with them.

Key contacts from this forum meeting:

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