



wye salmon
association

Stuart Smith
WSA Chair

*'a pressure group, interested in
the recovery of salmon stocks and
the engagement of the angling
community in that aim'*

Wye Salmon Association



Salmon like Ranunculus (water crows foot) and other species are indicator species with respect to the Wye SAC, Special Area for Conservation status



Wye Salmon Association

Considerable experience in managing and running volunteer schemes and projects such as semi natural rearing ponds, schools coaching courses and a five-year project continuously monitoring water temperatures in spawning streams.

We had in place;

- *public liability and volunteer insurance*
- *were practised in the preparation of risk assessments, and training*
- *With 400 members had a ready pool of volunteers.*

So, a head start. We also, very importantly had funding in place for such a project.



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Project began with 11 volunteers, spread loosely from Bigsweir in the tidal river to Llanbister on the Ithon in mid Wales

➤ *aim to develop numbers as and when the data being gathered dictated.*

Recruited a project leader and from within our midst a bio scientist and an experienced researcher

➤ *project catered for all ability levels of volunteer*

Experience of litmus style paper sampling of pH recognised variability.

➤ *survey of available technology quickly identified the Hanna Colorimeter as a robust, simple, repeatable means of monitoring phosphate levels at a cost that our budget could stand.*



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Citizen Scientists began monitoring water quality tracing sources of poor water quality events

Understanding of quality and range data collected limited by understanding of science

Approached Cardiff University to assist came as they planned a Collaborative Research Project, funded by NERC Wales

WSA gained advice, CU gained primary stakeholders, for their submission, a win win situation

Why we are here today

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*Database created online in excel files and
much email correspondence*

*Tabling by CU team of the online database
Epicollect reducing significantly the admin
effort*

Quill and papyrus remains option for some!





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Today we believe we are at the limit of what we can sensibly manage and provision.

In terms of range sufficient for our planned usage

In excess of 1500 entries and over 3000 individual sample values

covering phosphate, total dissolved solids, pH, temperature plus a small number of nitrate and ammonical nitrogen data.

So, to the question 'What are we doing with the data'?



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Data via Epicollect freely available to all

EA have access

NRW and Dwr Cymru on request

Subsets and histograms extracted to Nutrient Management Board, S&TC, Rivers Trust, River Action, AT and on a few occasions to MPs and MSs

WSA adopting a 'bottom up' approach to our use of the data.

Regulatory authorities will address the 'big picture' issues.

WSA identifying local issues searching concerns for local solutions.

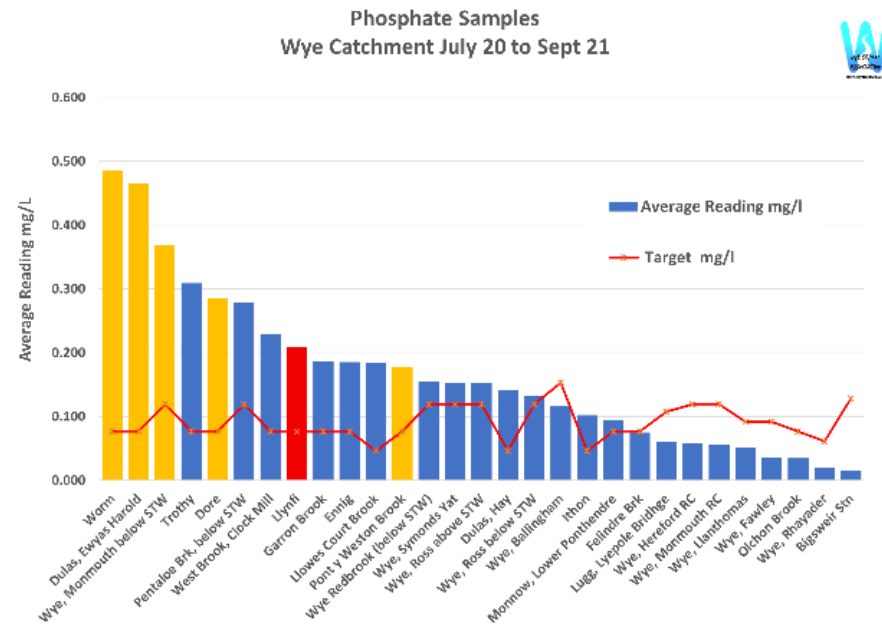
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Histogram shows some of our data

Yellow indicating where we have presented our data seeking solutions

Met with Dwr Cymru re Monmouth STW and an example of pollution at Fawley.

Met with EA re Dore Catchment listing catalogue of issues in the Golden Valley



Dore Catchment big issue

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Sampling Sites for Dore Catchment

WSA Data Audit



River	Sampling Location	Sampler(s)	Nat. Grid	Lat	Long	No. Samples	Sample Average PO4 gms/l	Calculated Average P gms/l ³⁾	Target P gms/l ²⁾	Traffic Light
West Brook	Middlewood Bridge, Clock Mills	TB	S0282446	52.056036	-3.041006	21	0.593	0.227	0.025	Red
Dore	Pontrilas	MW	S0395275	51.943033	-2.881392	25	0.523	0.204	0.025	Red
Worm	Warm 2 (Gough's Bridge)	JH/MW	S0442309	51.974037	-2.812762	12	0.504	0.198	0.025	Red
Stream	Marian Jones Stream	MW/TB	S0306420	52.072544	-3.012545	2	0.515	0.168	0.025	Red
Worm	Warm 1 (Sawmills footbridge)	LA/MW	S0425305	51.970401	-2.837774	14	0.490	0.160	0.025	Red
Dore	Peterchurch 4 (below STW)	HW/LA	S0348378	52.035645	-2.951166	4	0.482	0.158	0.025	Red
Worm	Warm 3 The Tram	JH/MW	S0460334	51.997288	-2.774824	12	0.393	0.129	0.025	Red
Dore	Vowchurch	TB/HW/LA	S0361364	52.022860	-2.931920	21	0.307	0.100	0.025	Red
Dules	Fwyas Harold	JH/MW	S0387286	51.952968	-2.853165	22	0.294	0.096	0.025	Red
Dore	Peterchurch 3 (Fairfield bridge)	TB/JH/MW	S0346381	52.038155	-2.953627	39	0.251	0.082	0.025	Red
Dore	Elm Bridge (Fwyas Harold)	MW	S0398785	51.952240	-2.827132	14	0.227	0.074	0.025	Red
Dore	Dore Bridge, Abbeydore	MW	S0386308	51.972888	-2.854057	15	0.223	0.073	0.025	Red
Pont y Weston Brook	Pont y Weston 1 (Oaklands Bridge)	TB/MW	S0313417	52.069733	-3.002252	28	0.211	0.069	0.025	Red
Dore	The Bage, Scar Lane	TB	S0302421	52.082114	-3.015286	13	0.188	0.065	0.025	Red
Dore	Darstone (B4348)	TB/MW	S0316410	52.071486	-2.958061	22	0.170	0.056	0.025	Red
Dore	Peterchurch 1 (Hinton Bridge)	HW/LA	S0340385	52.045354	-2.962608	6	0.170	0.056	0.025	Red
Trenant Brook	Peterchurch - Trenant Brook 1	HW/LA	S0347377	52.034675	-2.953059	4	0.130	0.043	0.025	Red
Pont y Weston Brook	Pont y Weston 4 (Bridge Cottage)	CL/TB	S0312417	52.069938	-3.004641	7	0.075	0.025	0.025	Yellow
Monnow	Lower Porthendre	PM	S0310290	51.963961	-2.951414	12	0.058	0.019	0.025	Green
Olchon Brook	Lower Porthendre	PM	S0327281	51.947468	-2.979195	12	0.046	0.014	0.025	Green
						305	0.324	0.106	0.025	Red

Notes

1) There are no Habitat designated Phosphorus targets for the Dore and Monnow however as it drains to the Wye SAC waterbody then water quality objectives should reflect the SAC target, i.e. equal to or better than the 0.030mg/l P target in the lower Wye where the Monnow of which the Dore is a catchment flows. Ref: Andrew Osbaliston, Catchment Coordinator & Technical Specialist (Integrated Environment Programme) at the Environment Agency, 08/10/21.

2) We have assumed with no advice to the contrary that waterbodies draining to the Wye SAC would need tighter water quality objectives as a result and have used target for the Unfri and Ithen as exemplars using NRW "Compliance Assessment of Welsh River SACs against Phosphorus Targets Report No. 489" as evidence.

3) Orthophosphate PO4 converts to Phosphate P by x 0.327



WASA WYE SALMON ASSOCIATION

Currently developing a full understanding of diffuse pollution in Llynfi

Preparation to open a conversation with NRW over the issues and our collected data on both the Llynfi and all its tributaries

There is more to do but only so many hours in the day.....



WYE SALMON ASSOCIATION

So, to summarise, what gave WSA a head start on other groups?

- *a plan of why we wanted to gather data and how we intended using it.*
- *experience in managing and running volunteer schemes and data collection.*
- *public liability and volunteer insurance.*
- *practised in the preparation of risk assessments, and training.*
- *with 400 members we had a ready pool of volunteers.*
- *Critically... funding in place for such a project.*



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THANK YOU