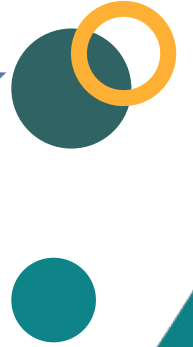




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FOUNDATION



# Jamie Carruth

Monitoring Lead

## 2025 Electrofishing season

Investigate

Determine

Deliver

# Electrofishing Intro



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- 150 sites across the Wye and Usk.
- Area covered around 100km in 3 directions from Talgarth.
- 5-minute riffle surveys.
- Improves understanding of salmonid spawning success trends.
- Informs future work.



**Investigate**

**Determine**

**Deliver**



# Contents

- 2024 EF refresh.
- 2025 Wye & Usk general results breakdown.
- Discussion of results.

**Investigate**

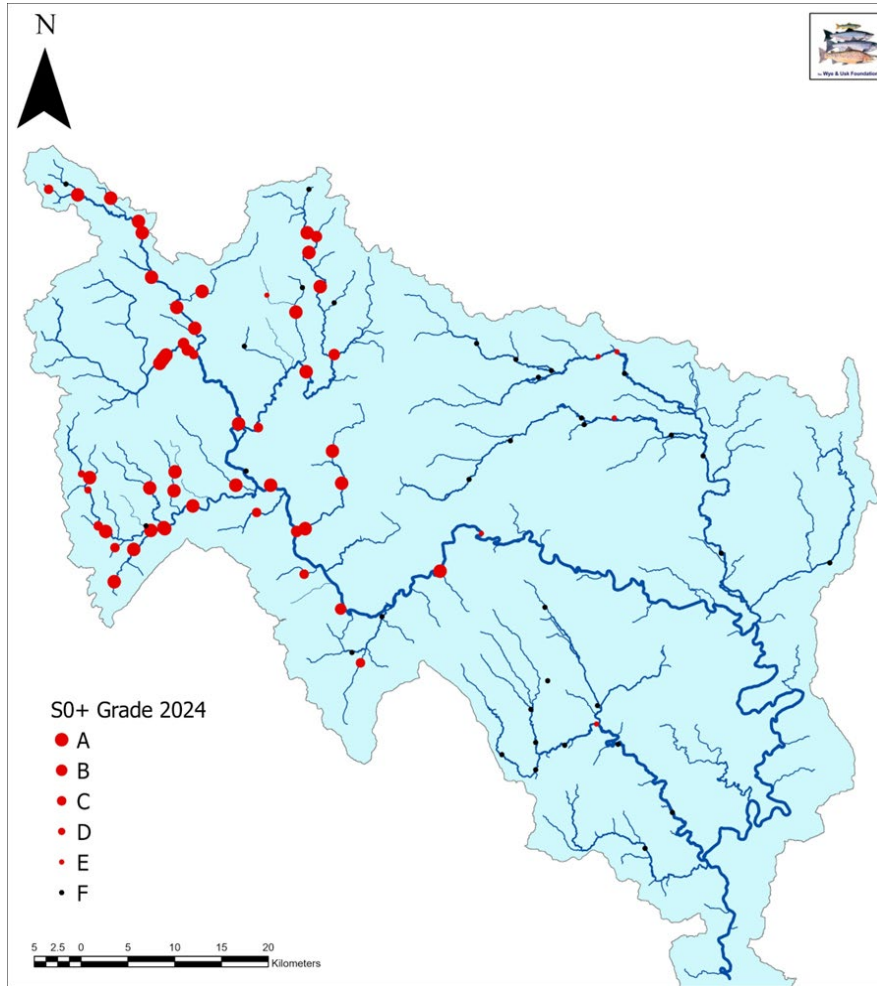
**Determine**

**Deliver**

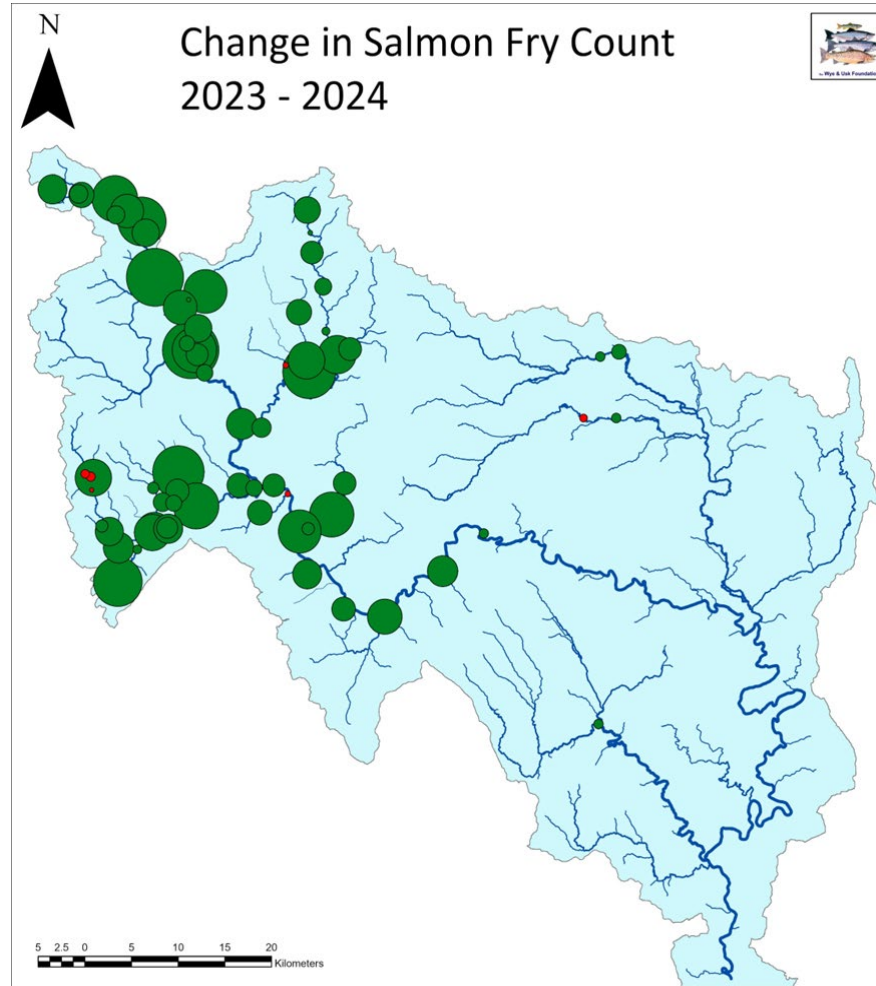
# 2024 Summary



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# 2024 – What We Learned



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- When conditions are great, low numbers of adult salmon can still produce very good numbers of juvenile salmon.
- Autumn rainfall intensity is key. We had exceptionally soft, steady rain in autumn 2023.
- Turbidity is a key driver of spawning success.

**Investigate**

**Determine**

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# 2025 Usk Results



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Upper Senni

**Investigate**

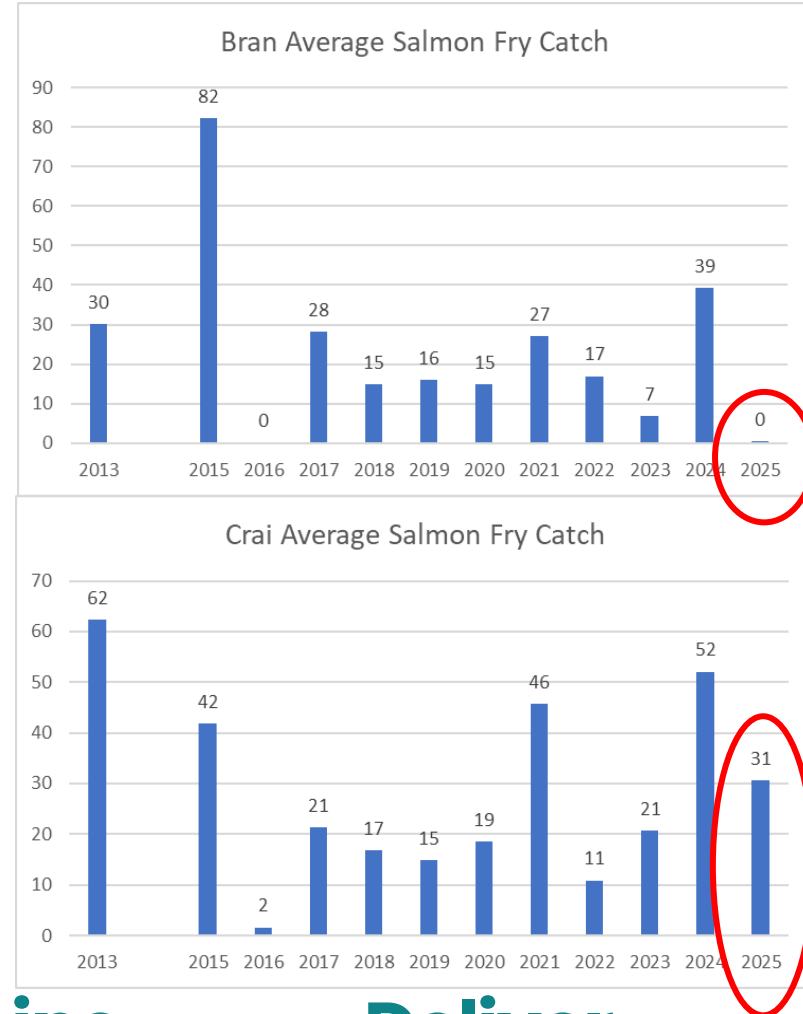
**Determine**

**Deliver**

# 2025 Usk results



- Brecon-Crickhowell tributaries and Usk mainstem remained the same as the majority of the last decade.
- Unfortunately, almost all recruitment on key upper Usk tributaries collapsed.
- The Afon Crai was the exception to these poor results.
- Positively, we had the highest average salmon parr catch in the last 9 years.



**Investigate**

**Determine**

**Deliver**

# 2025 Wye Results



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Irfon tributary – Garth Dulas

**Investigate**

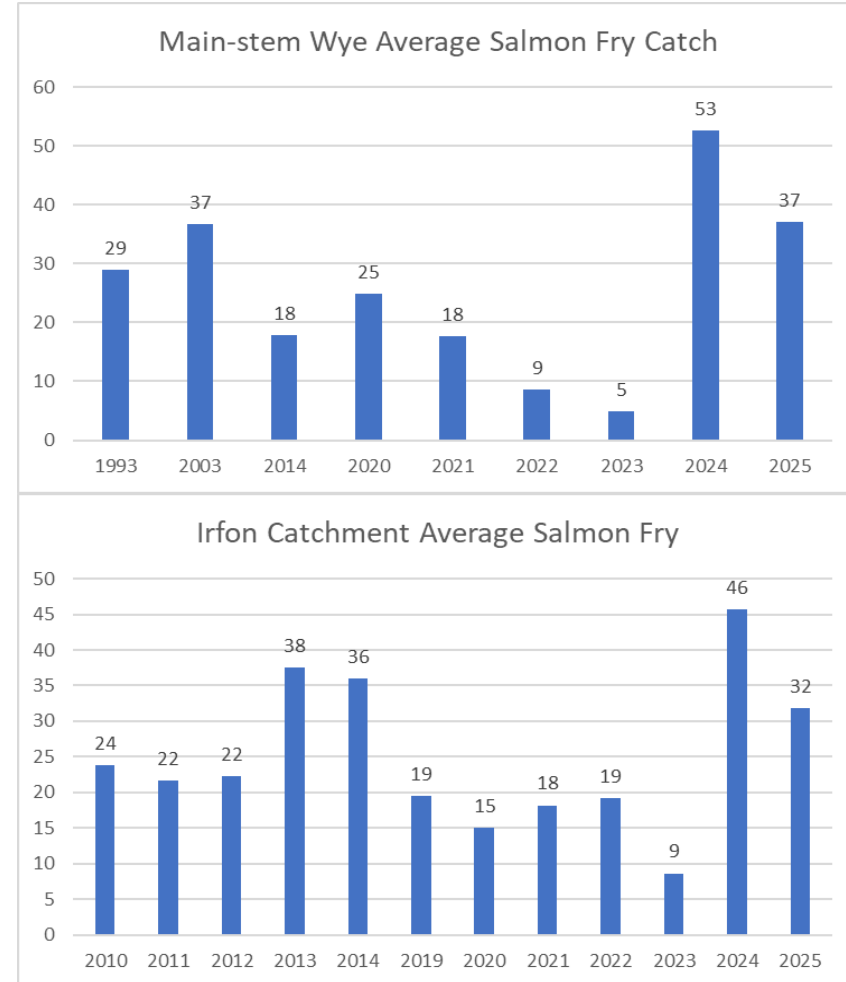
**Determine**

**Deliver**

# 2025 Wye results



- Generally, the Wye had another very positive year of juvenile salmon recruitment.
- Wye salmon spawning strongholds; Irfon & Ithon sub-catchments as well as the mainstem were excellent for both fry and parr.
- Other historically important tributaries such as the Marteg and Bidno continued to rebound.



**Investigate**

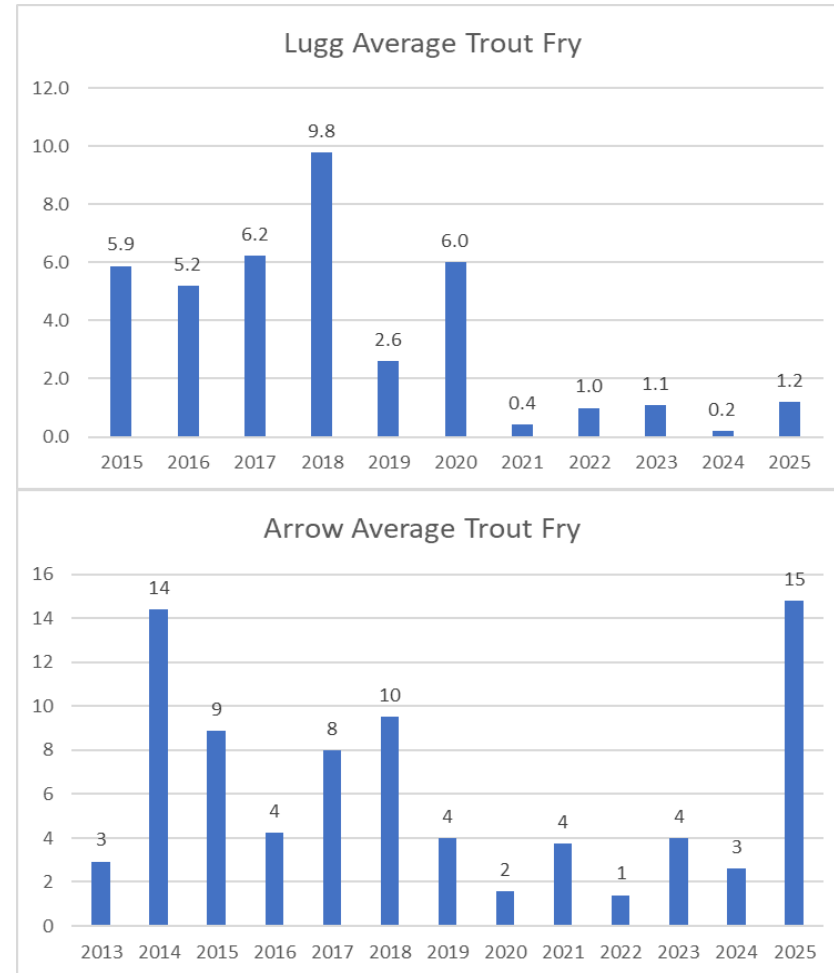
**Determine**

**Deliver**

# 2025 Wye results



- Hereford-area tributaries; Monnow, Arrow & Lugg, continued to be a near-zero for salmon spawning.
- Juvenile trout numbers are also suffering on these tributaries, with the exception of the Arrow, which improved.



**Investigate**

**Determine**

**Deliver**



# What were the causes?

- Local Issues.
- Catchment-wide patterns.

**Investigate**

**Determine**

**Deliver**



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# Local Issues

- Previously: Irfon acidity.
- Elan – gravel.
- Grwyne – barrier.
- 



Elan Valley Dam

**Investigate**

**Determine**

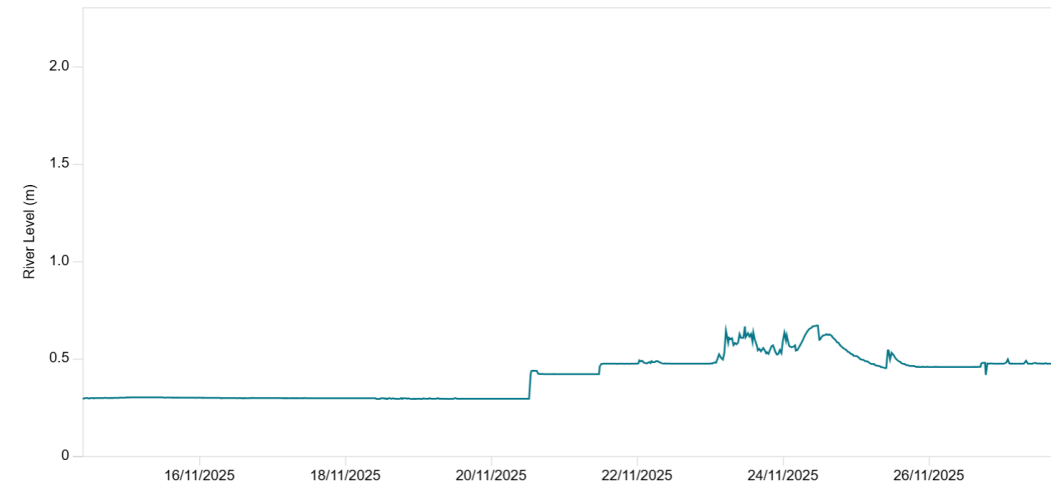
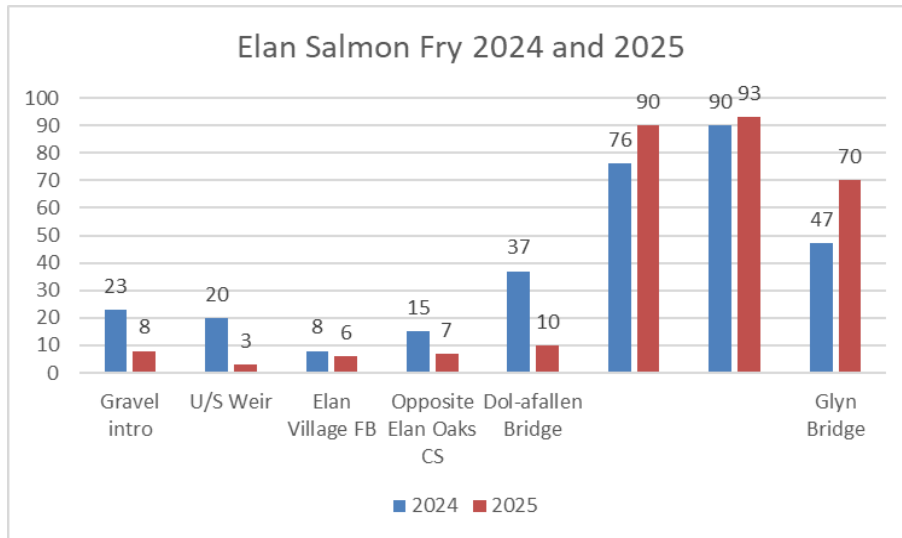
**Deliver**

# Elan (Wye) – Gravel/Water Release



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- Huge gravel resource blocked from Elan/Wye.
- Issues with sourcing gravel/water release.



Investigate

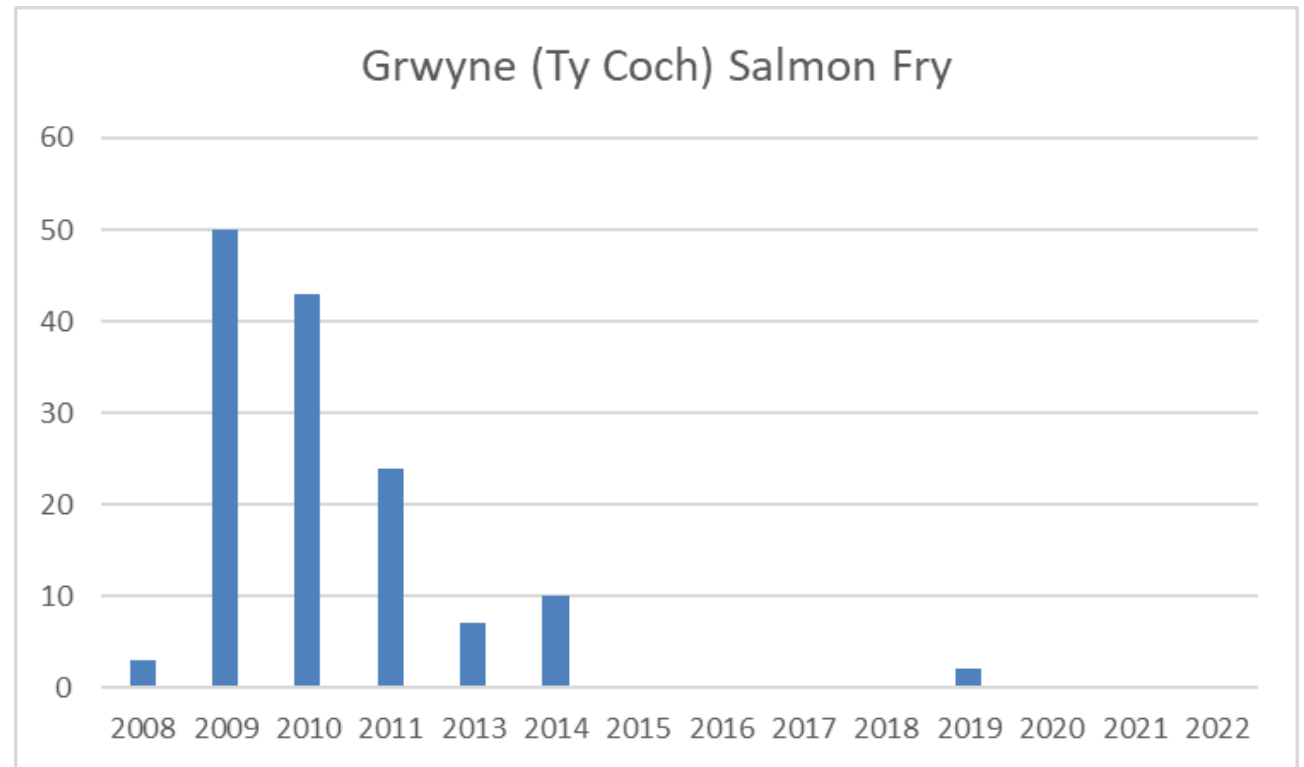
Determine

Deliver

# Grwyne (Usk) – Barrier



- In 2014/15 an impassable barrier affecting the Grwyne went unnoticed.
- Grwyne salmon run effectively wiped out.
- Case for localised re-stocking?



**Investigate**

**Determine**

**Deliver**

# Catchment-wide Issues



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- Overall catchment spawning success is weather-dependent.
- Exceptionally hot 2015 autumn – 2016 spawning failure on Wye & Usk.
- Drought conditions in autumn 2020 – spawning forced into lower end of upper Wye tributaries.
- Perfect 2023 autumn conditions – great 2024 juvenile salmon recruitment.



Wye 2cm deep at Hereford bridge (2020)

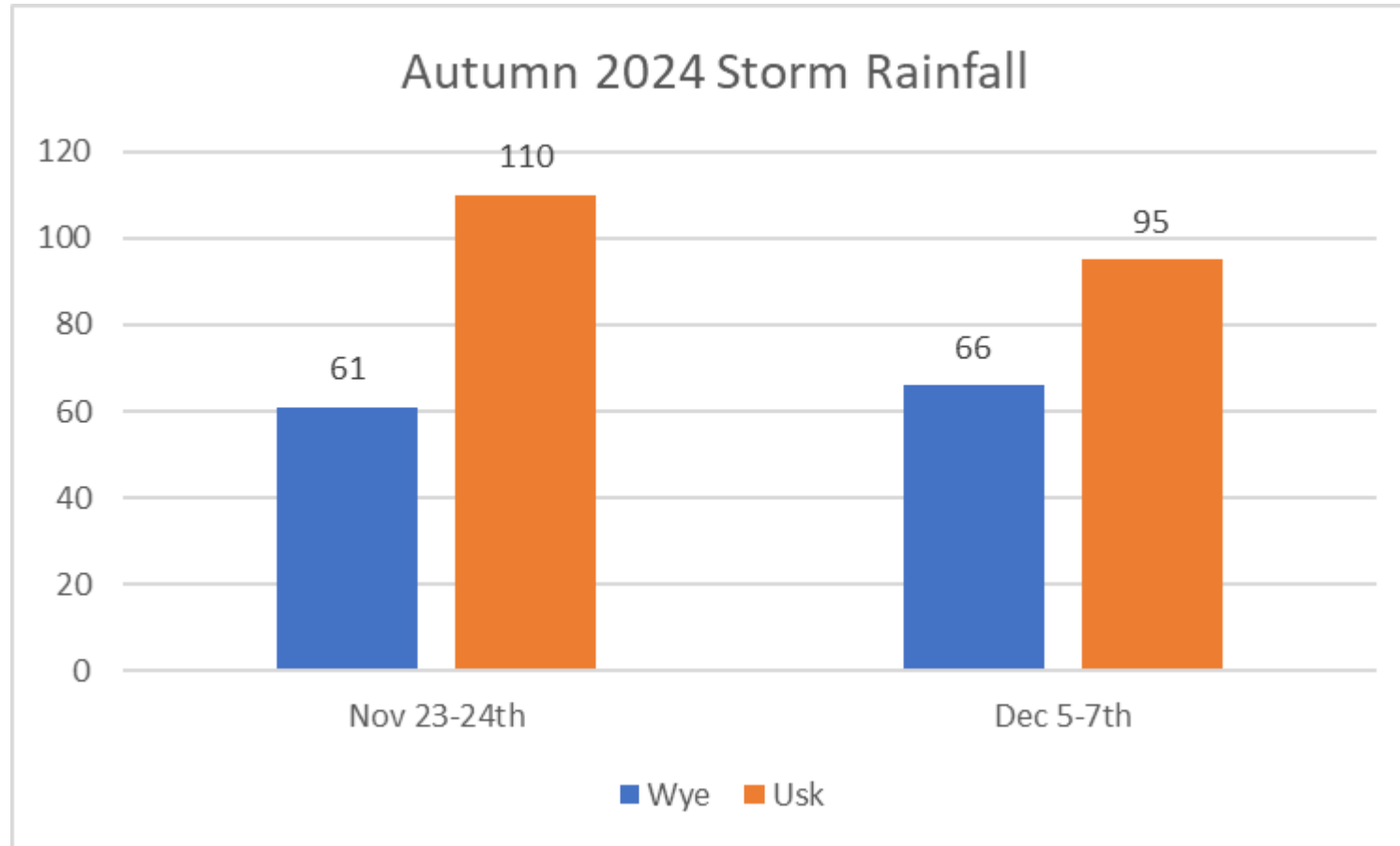
**Investigate**

**Determine**

**Deliver**



# Autumn Storms

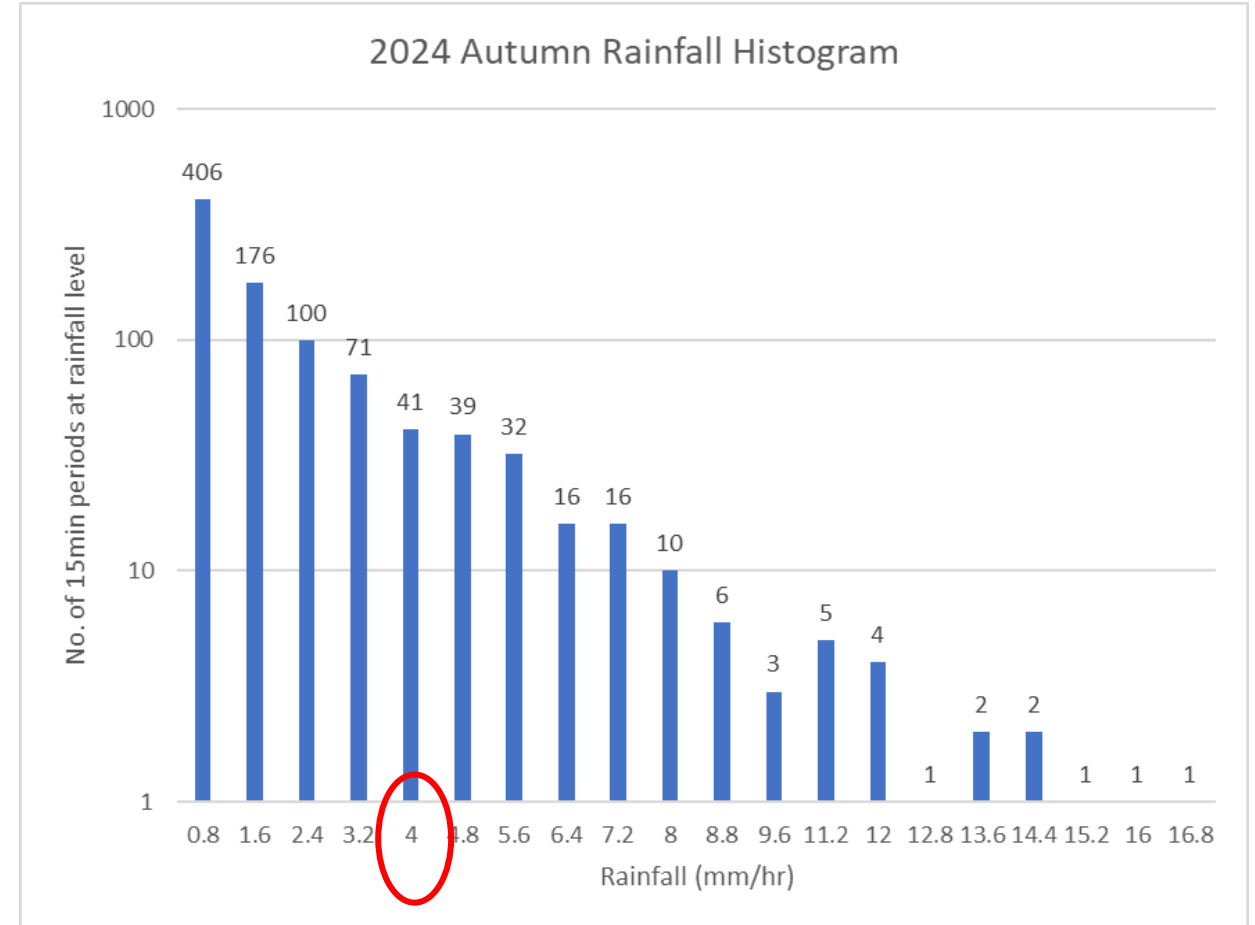
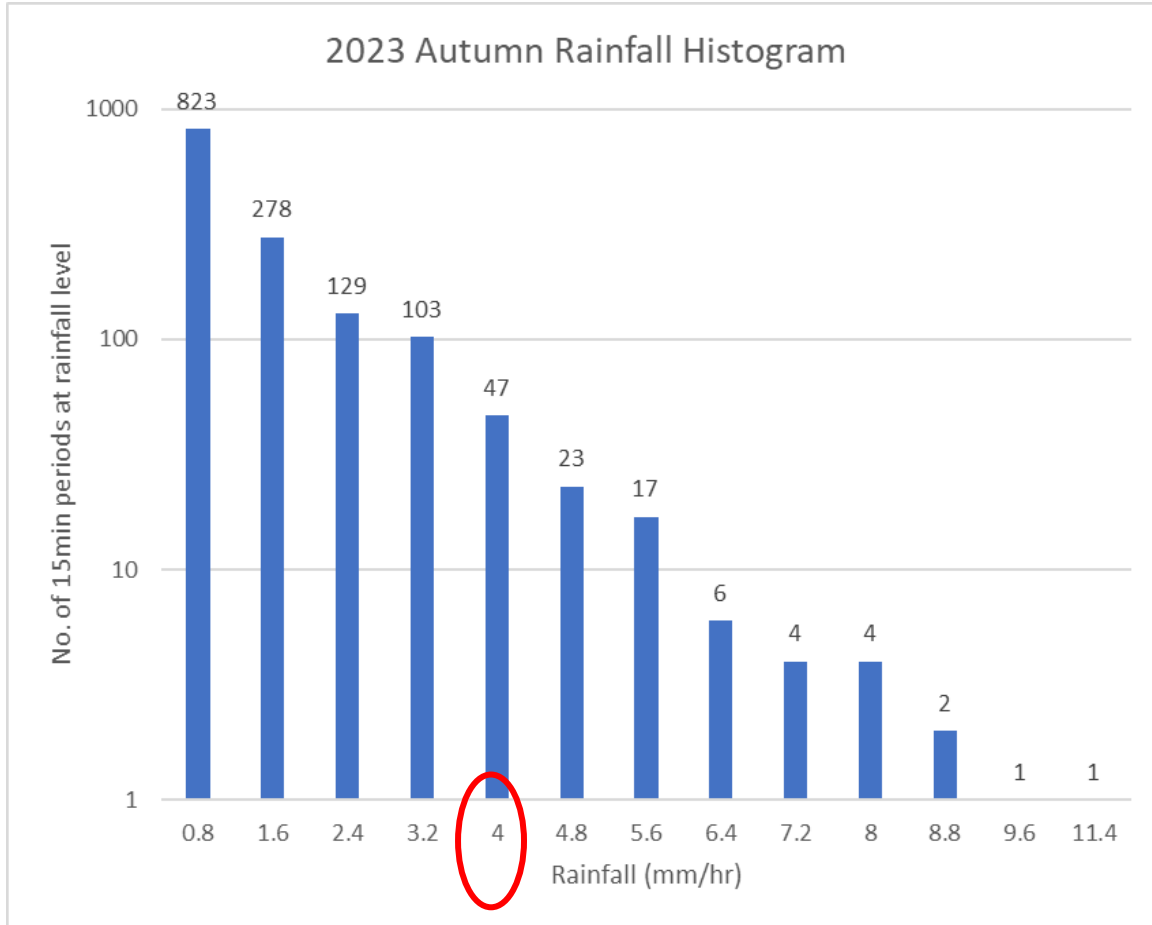


**Investigate**

**Determine**

**Deliver**

# Rainfall Severity (Usk)



**Investigate**

**Determine**

**Deliver**



# Explaining the Usk

- Loose sediment will clog redds, reducing oxygen.
- Fresh redds scoured out.
- Salmonid eggs are extremely vulnerable to physical disturbance in their first 48hrs.



Fresh salmon redd

**Investigate**

**Determine**

**Deliver**



# Explaining the Usk

- Further evidence of the effect of these storms:
- Crai performed far better than the other Usk tributaries.
- Bottom of tributaries on both the Wye & Usk performing better than top.

**Investigate**

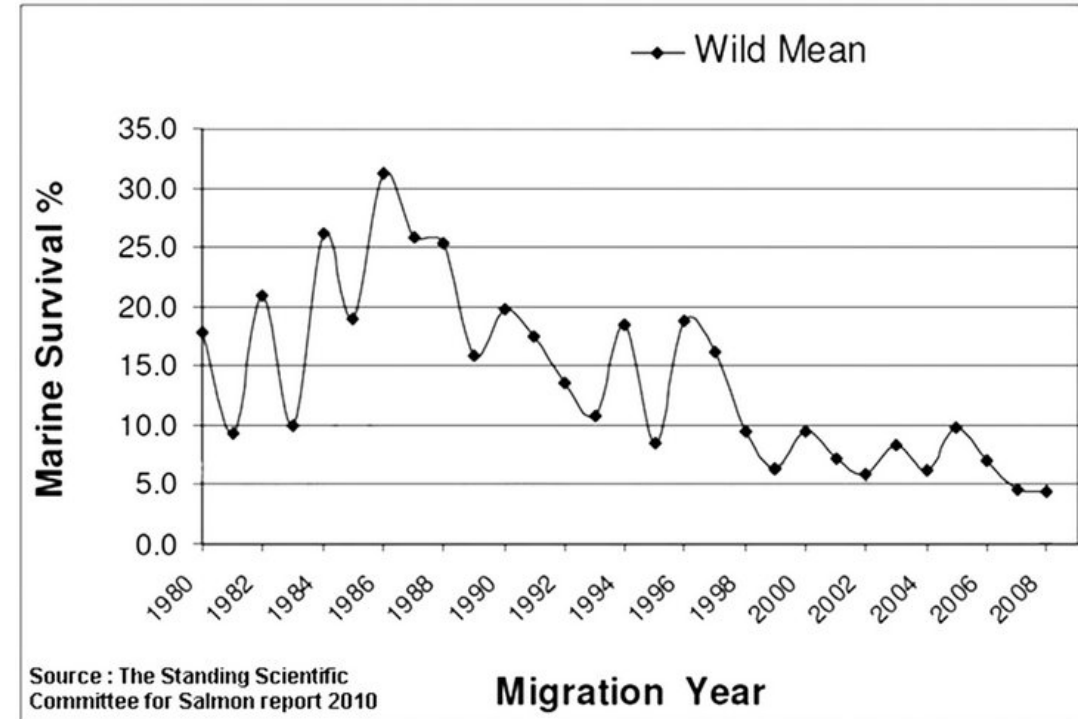
**Determine**

**Deliver**



# Overall Take-aways

- Three factors of overall salmon decline; collapsing marine survival, increasingly extreme weather, changing land use.
- Our target is to create healthy soils which absorb water.
- In good river conditions, low numbers of adult salmon can refill catchments.



Survival of Salmon at Sea

**Investigate**

**Determine**

**Deliver**