

Know Your River – River Taf Salmon and Sea Trout Catchment Summary

Introduction

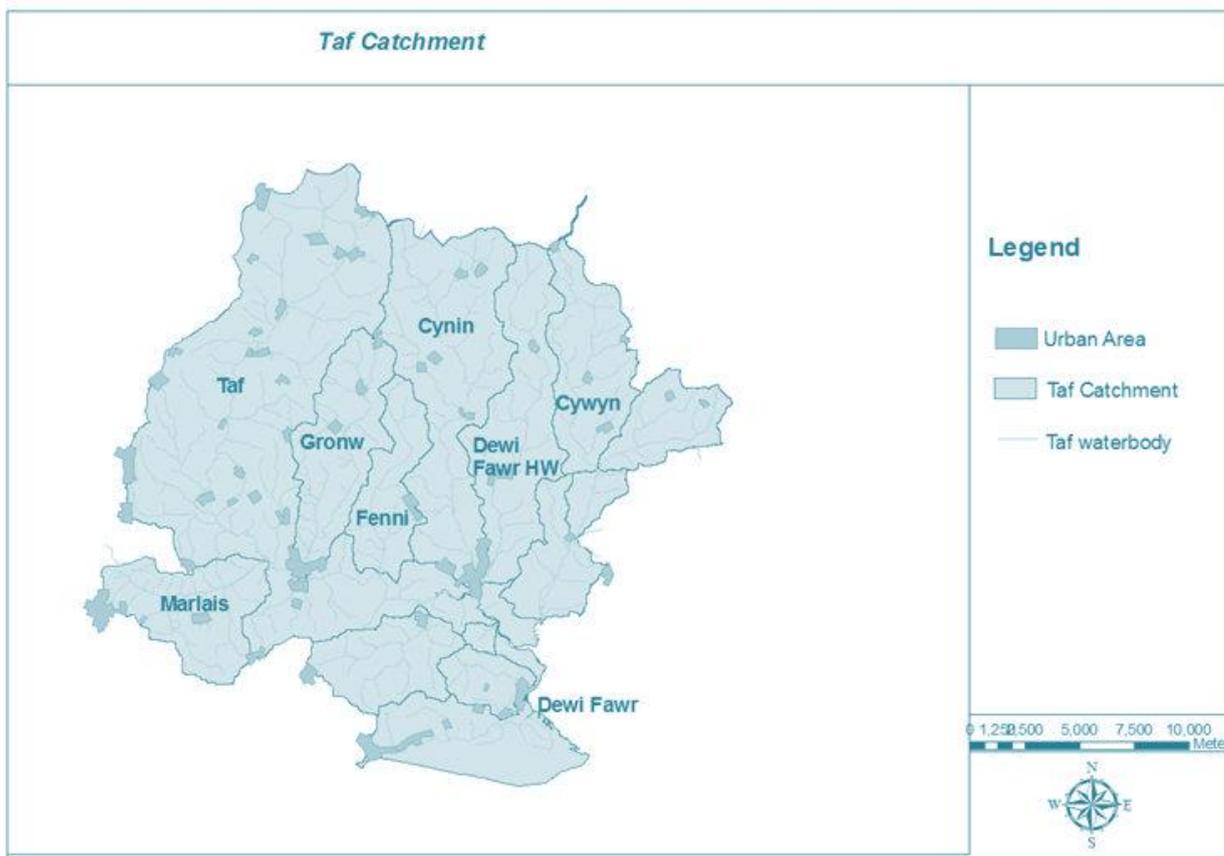
This report describes the status of the salmon and sea trout populations in the Taf catchments. Bringing together data from rod catches, stock assessments and juvenile monitoring, it will describe the factors limiting the populations and set out the challenges faced in the catchment.

Action tables set out habitat improvements to restore freshwater productivity of salmon and sea trout populations. These tables also include some work which will be carried out by our partner organisations, not just Natural Resources Wales (NRW).

NRW has a duty, defined in the Environment (Wales) Act 2016 to have Sustainable Management of Natural Resources (SMNR) at the core of everything that we do. By applying the principles of SMNR in all of our activities - from agriculture, forestry and flood defence to development planning - we are undertaking catchment-wide initiatives that will deliver for fish stock improvements. Our reports highlight the importance of considering the whole catchment when identifying and addressing fisheries issues; and of working with partners.

NRW is committed to reporting on the status of salmon stocks in all of our principal salmon rivers for the Salmon Action Plans and condition assessments under the Habitats Directive in SAC rivers; all fish species in all of our rivers are reported for the Water Framework Directive (WFD). This report will fulfil these commitments and provide an informative and useful summary of stock status and remedial work planned, for our customers, specifically anglers, fishery and land owners; as well as our partners.

River Taf



The River

The River Taf rises at an altitude of 200m above sea level, and flows down a steep valley for the first 15 km. The river then meanders within a relatively flat valley, through Whitland to St. Clears where it becomes tidal. Eventually the Taf joins the Tywi and Gwendraeth estuaries to form the Three Rivers estuary, before flowing into Carmarthen Bay.

Land use within the catchment is dominated by farming. Sheep and cattle rearing predominate in the upland areas, giving way largely to dairy farming in the middle and lower reaches. Crops are grown in small isolated areas around the catchment; one of the most important is potatoes, which are grown principally around Laugharne.

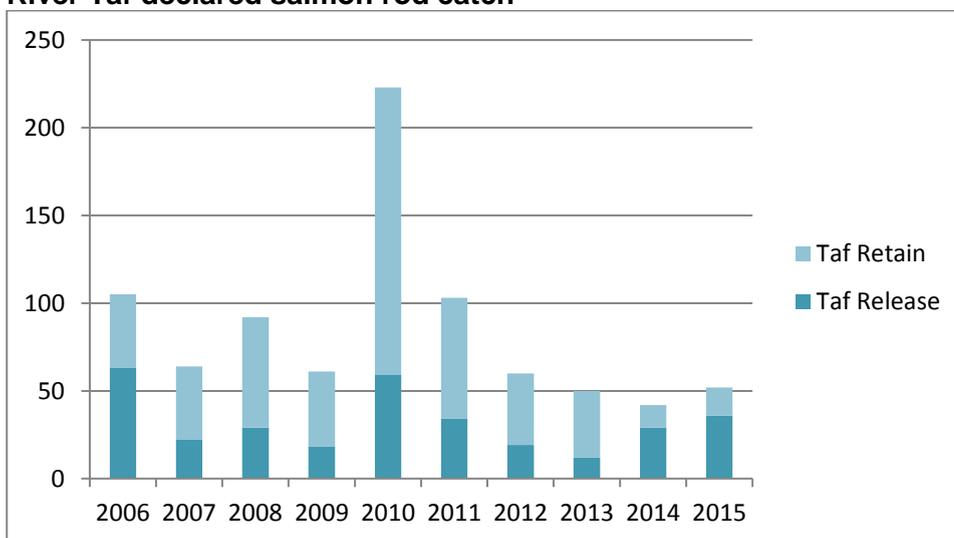
The Taf catchment supports a locally important salmon and sea trout (sewin) fishery, which includes one of only three remaining coracle fisheries in the UK. Sea trout are the predominant salmonid, with a reasonable number of salmon also present.

Rod Catches

The following graphs show the total declared rod catches, including numbers released or killed for salmon and salmon and sea trout on the Taf.

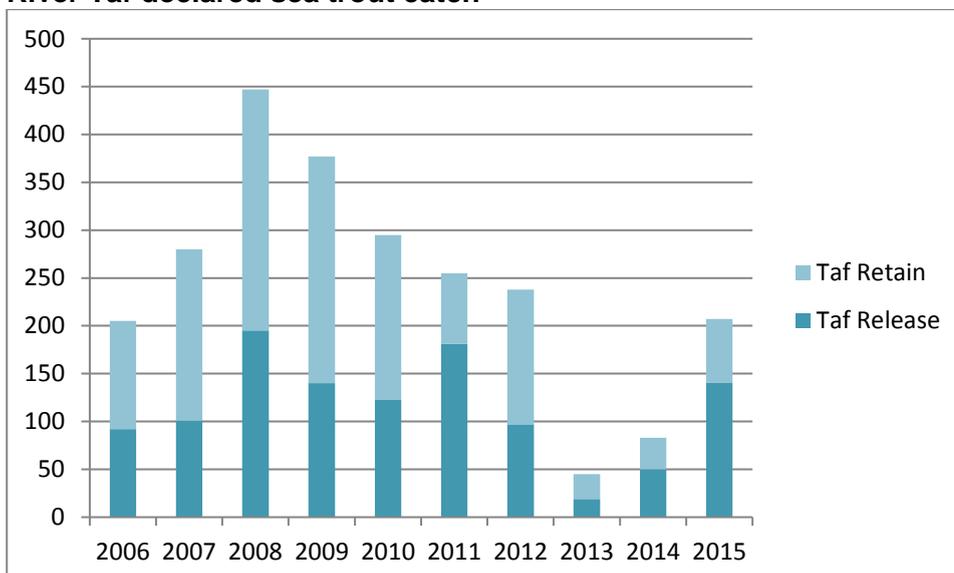
Declared salmon rod catches are variable over the period, with the highest catches reported in 2006 and 2010. The average proportion of the salmon catch returned alive is 41%. The release rate in 2015 was 69% which is above the Wales average of 60%.

River Taf declared salmon rod catch



Rod catches of sea trout also show considerable variation over the period, and reported catches of sea trout exceed those of salmon in nearly all years. The release rate for sea trout in 2015 was 68%, which is below the Wales average figure of 72%.

River Taf declared sea trout catch

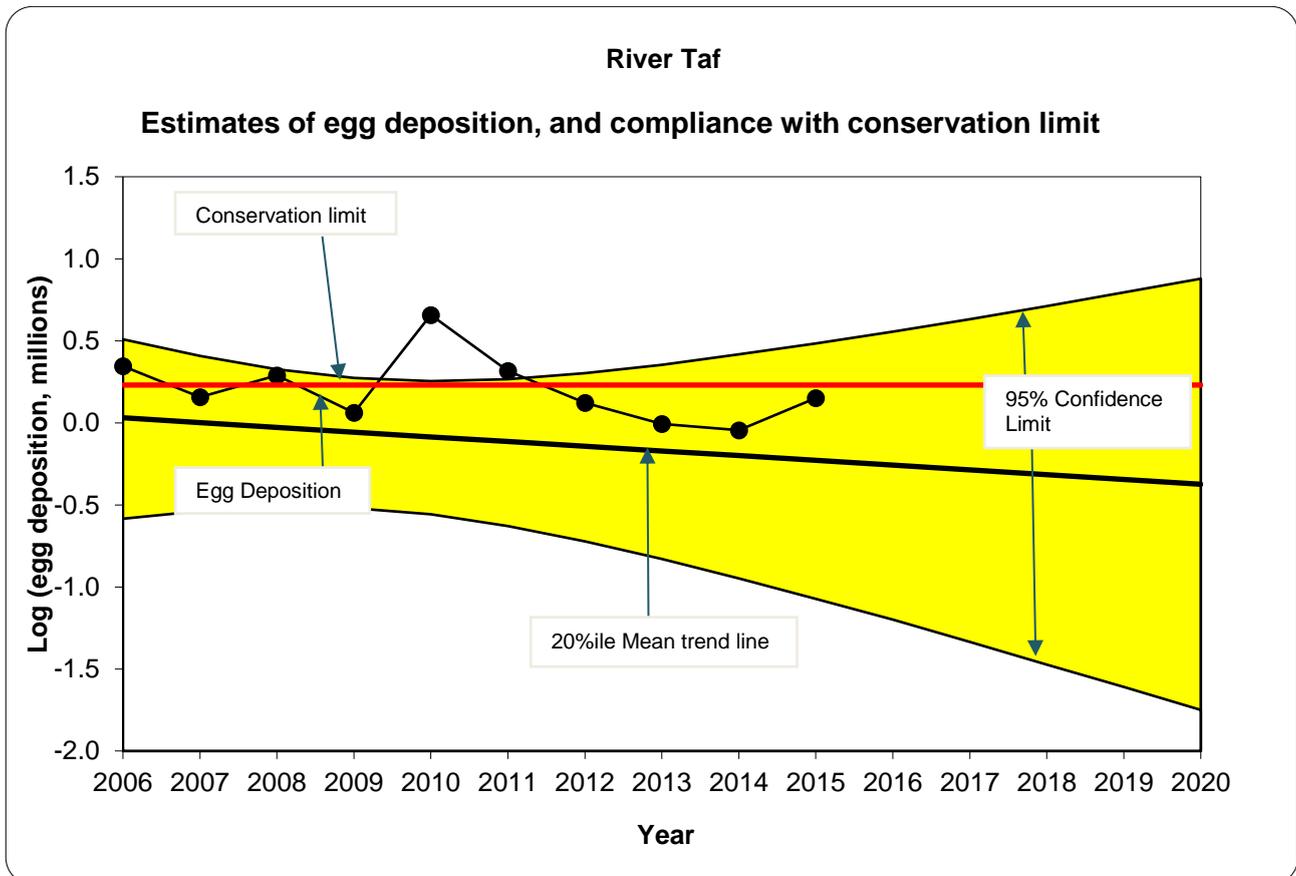


Stock Status

Conservation of Salmon

Salmon stock status is assessed through the use of 'Conservation Limits' which provide an objective reference point against which to assess the status of salmon stocks in individual rivers. The numbers of salmon a river can produce (and consequently the catches that the stocks support) are a function of the quality and quantity of accessible spawning and rearing area. This is why, in general, big rivers have larger catches and have correspondingly bigger total spawning requirements than small rivers. Thus, for any given rivers there should be an optimum level of stock which the CL seeks to protect. The conservation limit represents the number of eggs that must be deposited each year within a given catchment in order to conserve salmon stocks in the future.

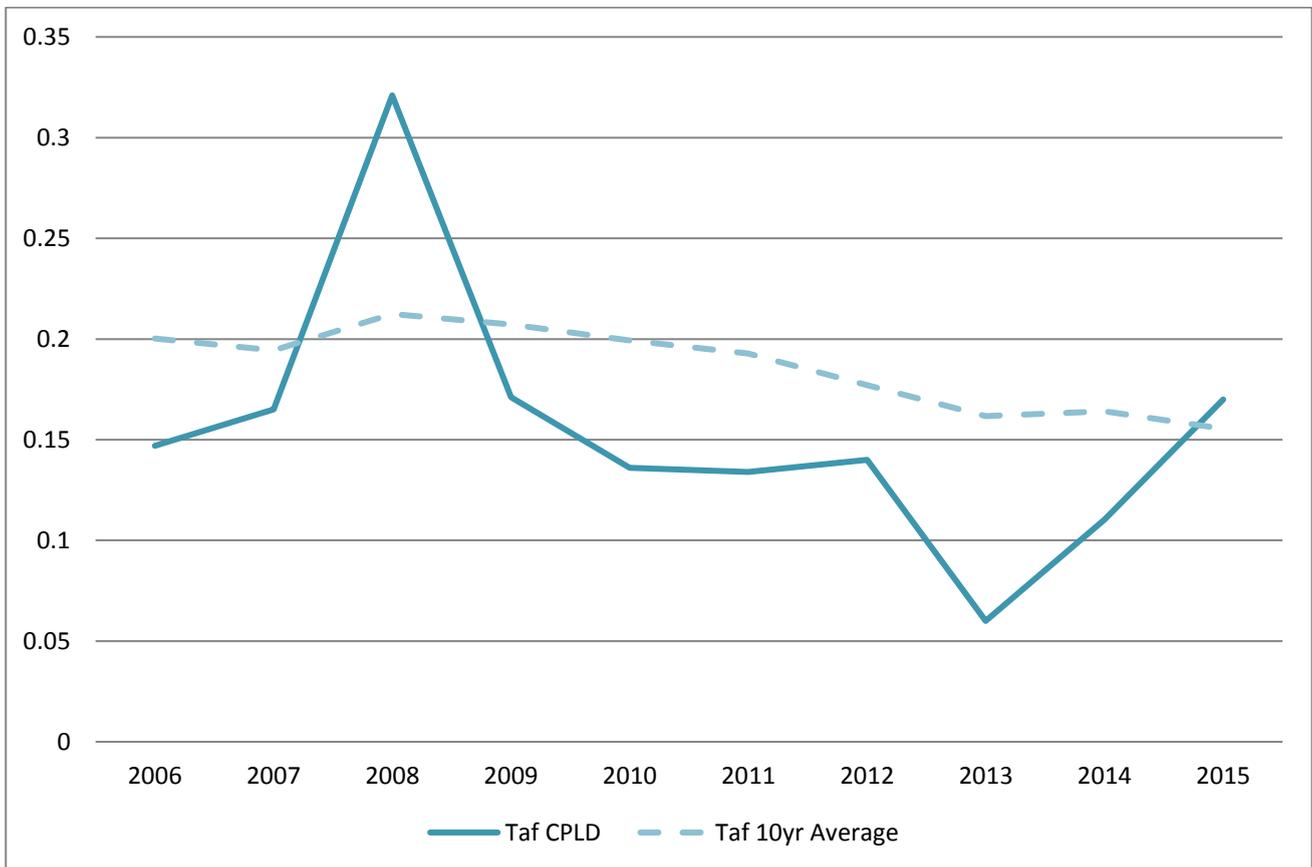
The conservation limit for the Taf is set at 1.7 million eggs, represented by the red line on the graph. The current number of eggs being deposited is just above the Conservation Limit, and the Taf is classed as '**Probably at Risk**'. In 5 years time, the predicted status of the Taf salmon stock will be '**Probably at Risk**'. Based on current and future trends, the Taf salmon stock will continue to **decline**.



Conservation of Sea Trout

Our approach to assessing sea trout stock performance is still under development. It is based on catch trends in the last three years compared with those in the previous ten. The assessment gives an early warning about potential problems and assists with considering whether any further management actions are required. It provides an indication of changes in fishery performance, though this is not always a reflection of stock performance.

Catch Per License Day (CPLD) is the average number of fish caught for each day fished on the river and as such accounts for the variability in the amount of fishing effort between years. These statistics can be a better guide than simply looking at the total catch. The CPLD figures for the Taf for the period 2006 to 2015 are shown below. Catch per Licence Day on the Taf is stable. The Taf sea trout fishery is currently classified as **'At Risk'**.

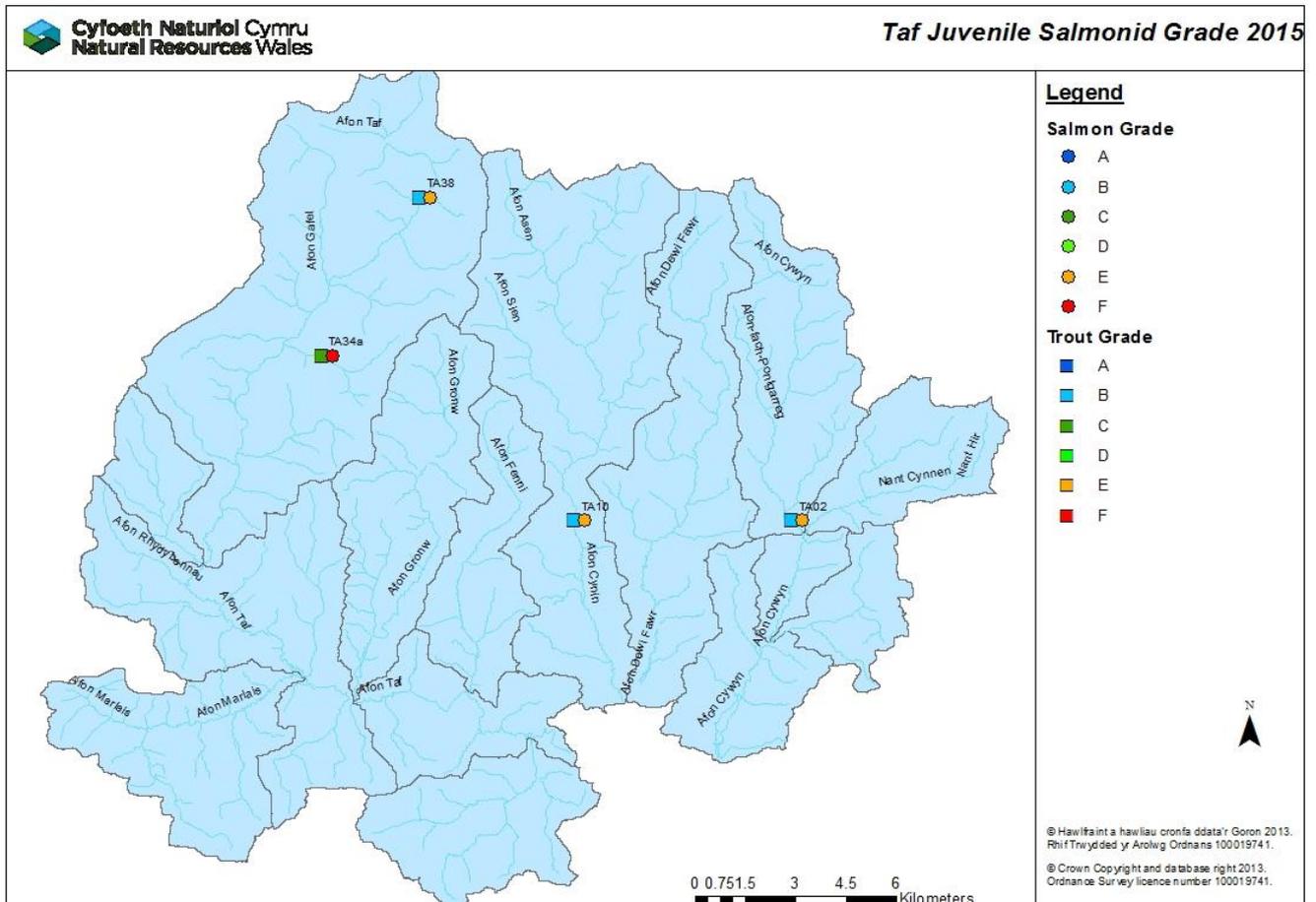


Juvenile Monitoring

The following maps show results of the 2015 juvenile salmonid populations gathered from electro fishing surveys. They display the National Fish Classification (NFC) grades which have been developed to evaluate and compare the results of fish population surveys in a consistent manner. The NFC ranks survey data by comparing fish abundance at the survey sites with sites nationally where juvenile salmonids are present. Sites are classified into categories A to F, depending on densities of juvenile salmonids at the site. The following table shows the values and classification of NFC.

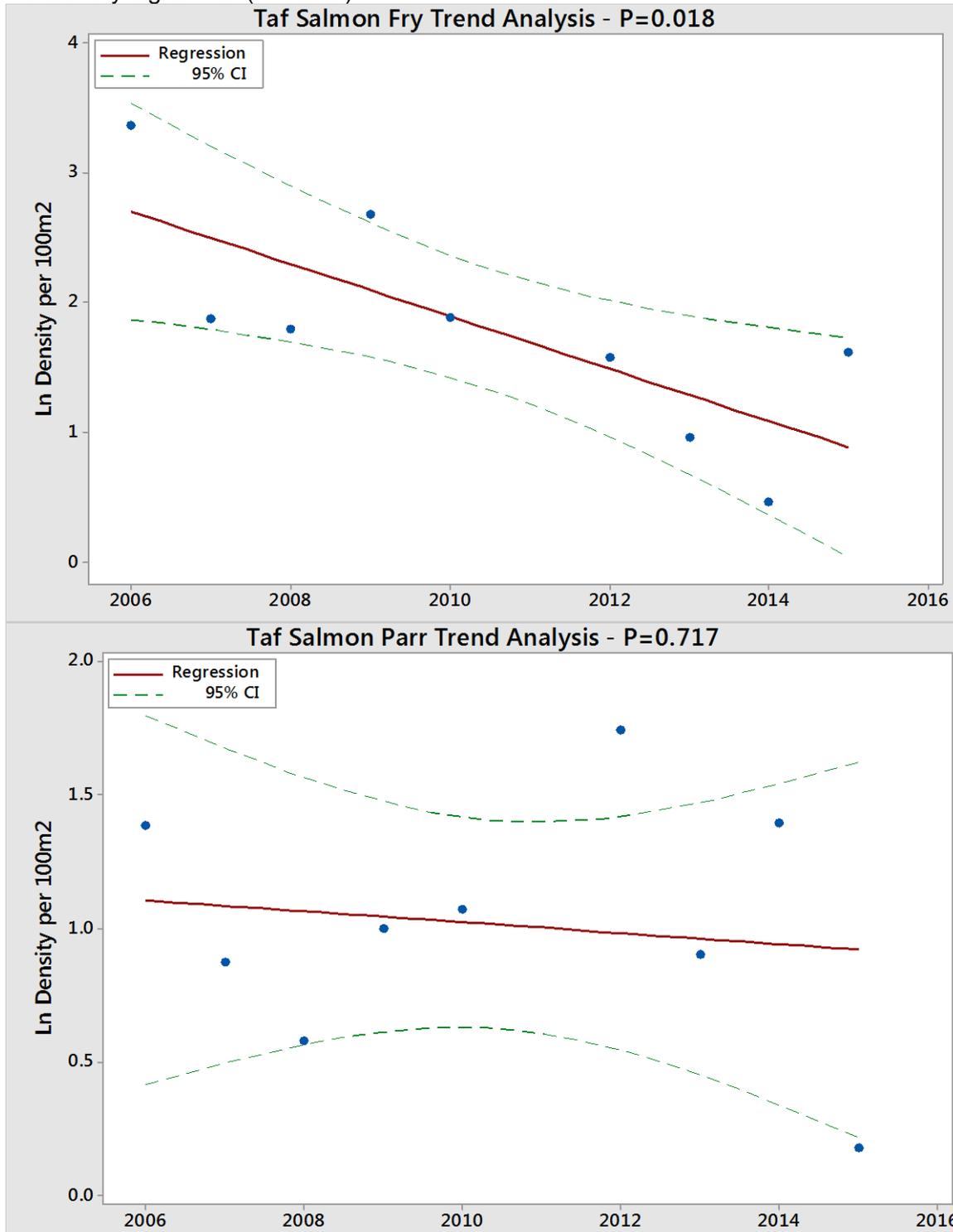
GRADE	Descriptor	Interpretation
A	Excellent	In the top 20% for a fishery of this type
B	Good	In the top 40% for a fishery of this type
C	Fair	In the middle 20% for a fishery of this type
D	Fair	In the bottom 40% for a fishery of this type
E	Poor	In the bottom 20% for a fishery of this type
F	Fishless	No fish of this type present

Juvenile trout were recorded at all sites surveyed in 2015. All sites achieved an E and F grades for salmon which is poor. Three sites achieved B grade for trout and one site achieved a C grade.

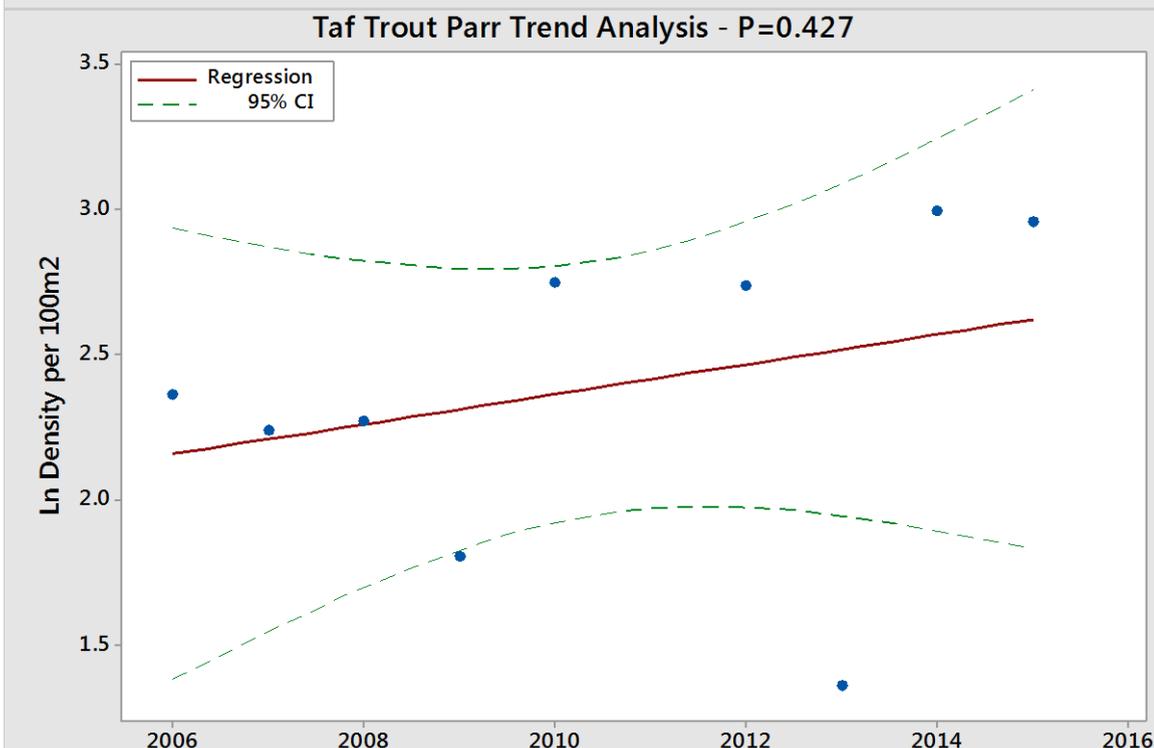
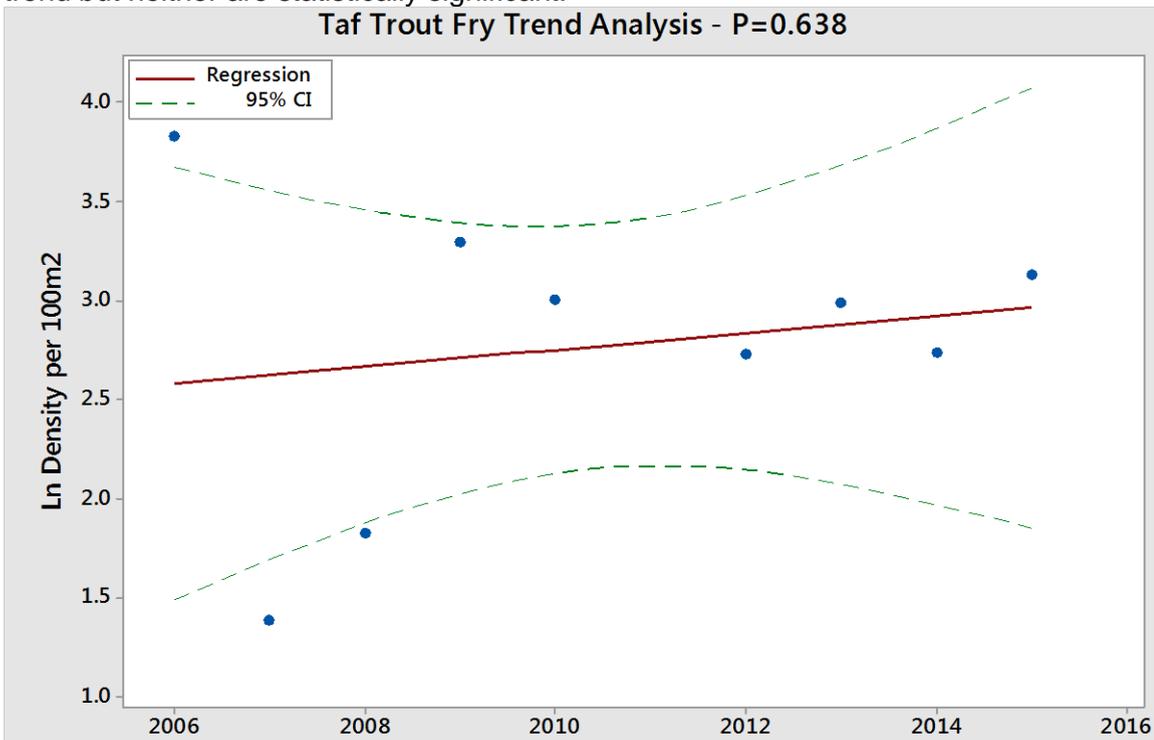


Juvenile Trend Analysis

Juvenile salmon data shows two downward trends for fry and parr. Fry data shows a downward trend which is statistically significant ($P=0.018$) but the downward trend seen in the parr data is not statistically significant ($P=0.717$)



The trend in juvenile trout numbers are very similar for both fry and parr. Both show an upward trend but neither are statistically significant.



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Fisheries Mitigation Plan

Site	Mitigation action	Benefits	Lead	Partner(s)	Timescales for delivery
Taf	Habitat improvements: We will investigate where there is opportunity to improve habitat for fish through improving access over barriers, restoration of riparian and instream habitat, including control of invasive species	More natural river system, reduced siltation, increased flow diversity, improved spawning gravels and juvenile habitat. Improved fish numbers.	NRW		Ongoing
	Water Framework Directive: We will continue to work to ensure no deterioration, monitor the status of the environment and investigate the causes of failures. Together with our partners we will look to put in place measures that protect and improve the status of the water environment.	<ul style="list-style-type: none"> Waterbodies protected and improved WFD waterbodies achieving Good Status/Potential 	NRW	NRW Wildlife trusts Local Authorities Landowners DCWW	Ongoing
	Enforcement: Action to reduce illegal activity on information provided and investigations.	Reduce illegal activity, more fish remain in the system.	NRW	Stakeholders SW Wales Police	Ongoing