West Sutherland Fisheries Trust
2024 Electrofishing Surveys

A report to the West Sutherland Fisheries Trust, Report No. 01/25

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West Sutherland Fisheries Trust
Gardeners Cottage
Scourie
By Lairg
Sutherland
IV27 4SX

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1. Introduction:

As part of West Sutherland Fisheries Trust's work programme, established sites in different freshwater catchments are routinely monitored through electrofishing surveys, which are carried out in accordance with Scottish Fisheries Coordination Centre (SFCC) protocol. This provides valuable information on temporal changes within juvenile salmonid densities. Where possible all sites were revisited, but due to natural changes in sites and weather conditions this was not achieved in all catchments.

This report summarises the data for each system surveyed and draws them together into an area-wide summary. Individual reports for each catchment, giving maps and detailing the data, are available on request.

2. Methodology:

Electrofishing equipment operates by creating an electrical field in the water which affects the muscles of the fish, causing them to swim towards the positive electrode (anode) and subsequently immobilises them for a brief period. At this point they can be captured for processing before being released unharmed into the river sections from which they were caught. As the electrical field is restricted in size and the conductivity of the water generally extremely low in most WSFT catchments, the best operating conditions are within shallow water in narrow tributaries. While it is possible to sample large main river stems, the escape rate is higher than that found in the narrower tributaries. Similarly, a high escape rate is found in exceptionally shallow, stony, or weedy areas, where fish can move into the substrate and are thus inaccessible to the nets.

Semi quantitative surveys are conducted in compliance with SFCC protocol. This involves one fishing run of a site in order to calculate a minimum estimate of juvenile salmonid densities. Although semi-quantitative surveys do not calculate absolute densities, they are quicker, enabling more sites to be covered, and give an indication of changes over time. This results in a broad picture of the population status of each catchment which can then be compared from year to year.

Fish densities were assessed using an electracatch backpack supplying smooth direct current (DC). Fish drawn to the hand-held anode were netted into a bucket and were retained until the end of the run for processing. The sites were fished systematically in an upstream direction, applying the same fishing pressure throughout to ensure that all fish had the same probability of capture as far as possible, thus increasing the reliability and accuracy of the minimum estimates of density.

All fish were anaesthetised using Tricaine Pharmaq, identified to species and measured (± 1 mm). Small scale samples were taken from a proportion of each length range for age determination, split into fry (young of the year, 0+ years old) and parr (≥1 years old). The fish were then placed in a bucket before being returned to the survey site upon complete recovery. Densities of fish were calculated as minimum estimates, such that a minimum number of fish present per 100 m^2 could be determined. Water level was not used in the density estimates, although it must be realised that stream conditions will have an impact on the density determined and efficiency of the fishing technique. Fish densities were then categorised using the SFCC salmonid density classification scheme for the Northwest area, which can be seen in table 1.

In 2024 some of the electrofishing sites were surveyed using fish the 3-pass electrofishing method. This is a quantitative electrofishing method, carried out following guidelines set out by SFCC. This method is similar to 1-pass electrofishing, with 3 passes conducted on the same site. Each run is processed separately, with processed fish kept in in-river holding bins as subsequent passes are

carried out. As it is assumed there is no movement of fish in or out of the site during the survey, there should be a depletion of fish numbers run to run. If so, the Zippin method can be applied to the results to calculate an estimated density, and a capture efficiency. In 2024 only a few sites on the Polla were fished with the 3-pass method, so data from NEPS23 were also used.

The average capture efficiency from the Polla catchment and 2023 NEPS was applied to the 1-pass survey results using the equations detailed in Malcolm et al (2023) where count equals the number of fish caught (split by age class and species), and Pcum equals the cumulative capture probability (Pcum = 1 - (1 - P1) * (1 - P2) * (1 - P3)), giving estimated densities for all.

$$Estimated\ density = \frac{\sum count_{pass\ n}}{site\ area * Pcum}$$

Bankside and instream characteristics, including substrate type, water flow, and riparian cover, were recorded at each site in accordance with the SFCC habitat survey associated with electrofishing surveys.

Table 1: SFCC salmonid density classification scheme for the Northwest area

		Minimum density per 100m²			
SFCC Class	**Descriptor**	**Salmon Fry**	**Salmon Parr**	**Trout Fry**	**Trout Parr**
A	Excellent	26.05	13.09	15.80	8.58
B	Good	14.15	8.04	8.25	4.31
C	Moderate	8.00	4.67	4.26	2.72
D	Poor	4.42	2.58	1.99	1.52
E	Very Poor	0.78	0.66	0.44	0.22
U	Unclassified	0	0	0	0

3. Results:

3.1 Hope

Table 3.11 shows the grid reference, and location of each site fished. Minimum density estimates of salmon and trout fry (0+ years) and parr (>1 year) per 100m^2 in each site are presented in table 3.12 and classified in accordance with the SFCC classification scheme (table 1).

Table 3.11: Electrofishing site details.

Site Code	Easting	Northing	Situation
H1A	247704	957864	Allt a'Mhuillin. Just below small falls, 200m upstream from road.
H2A	247381	956926	Breasgill, below the road.
H2B	247452	956947	Breasgill burn, above road and below sheep dip.
H4A	246173	947722	Tributary at shed by Ben Hope path.
H9A	242063	941561	Abhainn Strath Coir an Easaidh, 1 mile up the track, just upstream of stone bridge.
H9B	243659	941883	Abhainn Strath Coir an Easaidh, by lodge.
H10A	243143	941471	Allt a Choire Ghrainde, just below bridge.

Table 3.12: A summary of the minimum and estimated densities of salmon and trout fry (0+ years) and parr (greater than 1 year) at each site per 100 m^2.

			Minimum Density				Estimated Density			
Site Code	Habitat Type	Comments	Salmon Fry	Salmon Parr	Trout Fry	Trout Parr	Salmon Fry	Salmon Parr	Trout Fry	Trout Parr
H1A	Parr	Good instream cover, no bankside cover.	0.00	0.00	13.70	0.00	0.00	0.00	29.60	0.00
H2A	Mixed	Good instream cover, moderate bankside cover.	9.30	9.30	6.20	9.30	22.84	16.10	13.38	20.05
H2B	Mixed	Excellent instream cover, no bankside cover.	30.03	11.26	18.77	22.52	73.96	19.55	40.61	48.68
H4A	Fry	Excellent instream cover, moderate bankside cover.	3.54	24.76	17.69	0.00	8.69	42.87	38.17	0.00
H9A	Mixed	Good instream cover, no bankside cover.	0.00	0.00	0.93	7.41	0.00	0.00	2.00	16.00
H9B	Mixed	Good instream cover, no bankside cover.	7.15	10.72	1.19	4.76	17.56	18.57	2.57	10.28
H10A	Mixed	Good instream cover, no bankside cover.	0.00	0.00	8.68	10.42	0.00	0.00	18.75	22.48

Salmon and trout are widespread throughout the Hope catchment, with salmon only absent from H1A, H9A and H10A. Salmon parr densities were higher than fry in most sites due to habitat type, a trend seen in trout also.

The minimum, maximum, and mean minimum densities, and the average estimated density for the catchment can be seen in table 3.13. This summarises the system and allows direct comparison between all surveyed catchments in the West Sutherland area.

Table 3.13: A summary of the minimum estimate densities determined for all sites surveyed (per 100m^2), and the average estimated density.

Species/Lifestage	Minimum	Maximum	Average Minimum Density	Average Estimated Density
Salmon Fry	0	30.03	7.14	17.58
Salmon Parr	0	24.76	8.01	13.87
Trout Fry	0.93	18.77	9.59	20.73
Trout Parr	0	22.52	7.77	16.78

Figures 3.11 and 3.12 show the temporal fluctuations in the average juvenile salmon and trout densities in the catchment. Figure 3.11 shows a general increase in salmon fry and parr densities since the system was first surveyed, with fry densities peaking in 2022, and parr peaking in 2017. Trout fry densities show a gradually increasing trend over time, with parr remaining consistent and stable at around 5 fish/100m^2.

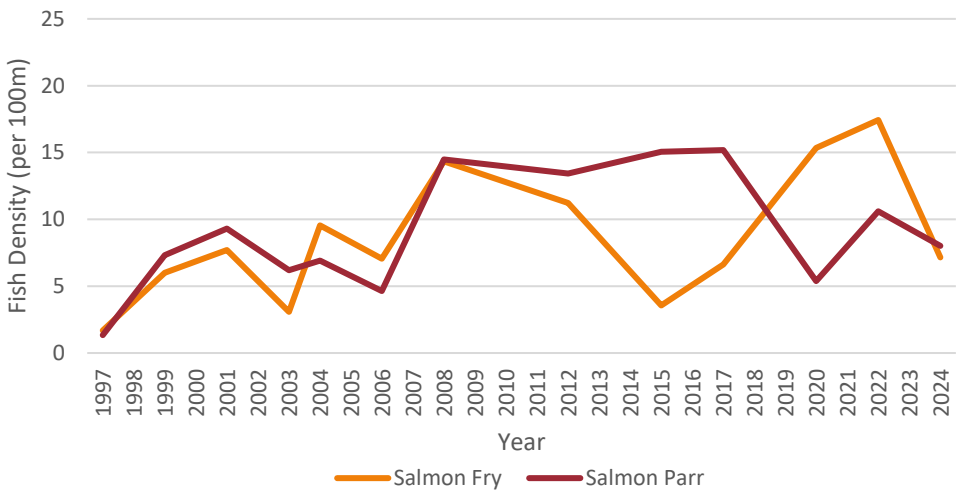
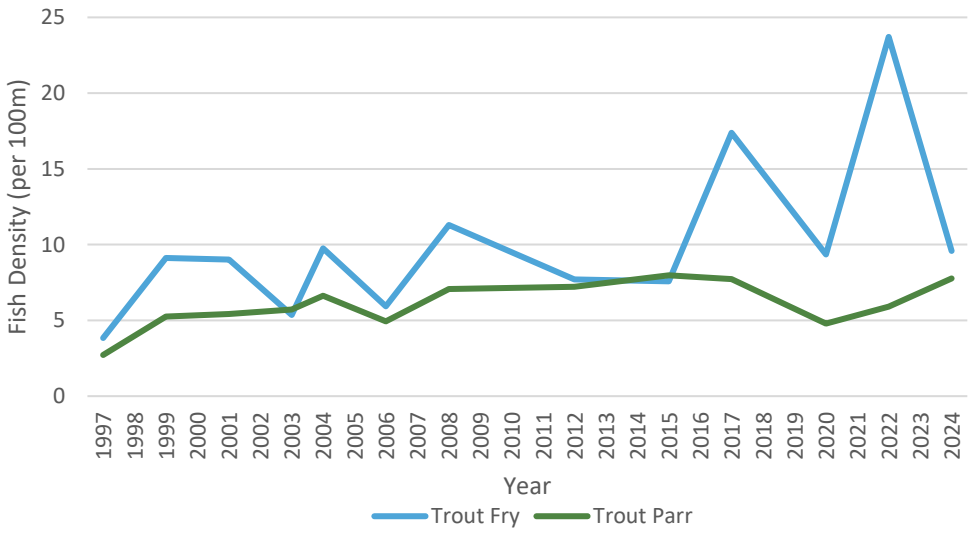


Figure 3.11: Temporal changes in average salmon densities within the Hope catchment.**Figure 3.12:** Temporal changes in average trout densities within the Hope catchment.



In 2014 Hurricane Bertha caused considerable changes to some of the tributaries along the east shore of Loch Hope. With respect to this survey, H2 and H4A were severely altered in terms of both sediment and riparian areas. In H2, while both sites have been impacted physically, they now show little impact in terms of fish density, with recent observed densities similar or better than pre-2014 levels. Whilst the 2024 data shows a drop in density from 2022, levels are still within the usual fluctuation for the sites. The channel of the Breasgill burn has stabilised over time but remains vulnerable to change in exceptionally high spates due to the lack of complex vegetation reinforcing the banks.

Salmon historically form a small component of the salmonid population in H9A, however have not been observed in the site since 2015. This firmly suggests that there has been a change in the burn preventing salmon access.

This catchment could benefit from strategic planting of broadleaf trees in riparian zones, which would improve fish cover, food availability, and bankside stability – overall providing great benefits to fish populations.

3.2 Polla

Table 3.21 shows the grid reference, and location of each site fished. Minimum density estimates of salmon and trout fry (0+ years) and parr (>1 year) per 100m^2 in each site are presented in table 3.22 and classified in accordance with the SFCC classification scheme (table 1).

Table 3.21: Electrofishing site details.

Site Code	Easting	Northing	Situation
P2A	238599	954120	Allt Coire an Uinnseinn, upstream of bridge
P4A	239087	951809	Mainstem river, adjacent to Strabeg House
P5A	239118	951907	Allt Odhsrgaraidh, downstream of ford
P8A	238851	952436	Small burn across from field, 10m upstream from mainstem
P9A	239002	952317	Old channel in mainstem, 20m upstream of confluence with current channel

Table 3.22: A summary of the minimum and estimated densities of salmon and trout fry (0+ years) and parr (greater than 1 year) at each site per 100 m^2.

			Minimum Density				Estimated Density			
Site Code	Habitat Type	Comments	Salmon Fry	Salmon Parr	Trout Fry	Trout Parr	Salmon Fry	Salmon Parr	Trout Fry	Trout Parr
P2A	Fry	Moderate instream cover, excellent bankside cover	43.48	2.90	5.80	0.00	86.96	5.02	8.70	0.00
P4A	Mixed	Good instream cover, moderate bankside cover	21.57	13.73	25.49	0.00	42.07	43.57	39.06	4.51
P5A	Mixed	Good instream cover, poor bankside cover	24.77	30.96	21.67	3.10	53.04	23.79	55.07	0.00
P8A	Fry	Moderate instream cover, excellent bankside cover	28.13	0.00	3.13	9.38	69.16	0.00	6.75	20.23
P9A	Fry	Excellent instream cover, poor bankside cover	0.00	4.33	12.99	0.00	0.00	7.50	28.06	0.00

Salmon and trout are present in good and excellent densities throughout the Polla catchment, with both species present in every site. The habitats and burn width for the surveyed sites were varied, indicating that a multitude of tributaries are utilised.

The minimum, maximum, and mean minimum densities, and the average estimated density for the catchment can be seen in table 3.23. This summarises the system and allows direct comparison between all surveyed catchments in the West Sutherland area.

Table 3.23: A summary of the minimum estimate densities determined for all sites surveyed (per 100m^2), and the average estimated density.

Species/Lifestage	Minimum	Maximum	Minimum Density Average	Estimated Density Average
Salmon Fry	0	43.48	23.59	50.24
Salmon Parr	0	30.96	10.38	15.98
Trout Fry	3.13	25.49	13.81	27.53
Trout Parr	0	9.38	2.49	4.95

Figures 3.21 and 3.22 show the temporal fluctuations in the average juvenile salmon and trout densities in the catchment. Figure 3.21 shows a general increase in salmon fry and parr densities since the system was first surveyed, with fry densities peaking in 2024. Trout densities also show a gradually increasing trend over time, though this is less pronounced in trout parr densities.

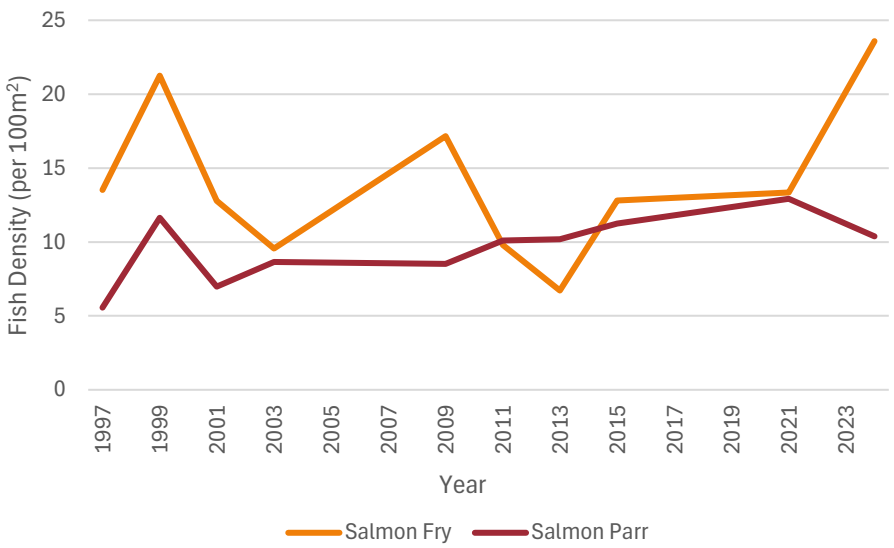


Figure 3.21: Temporal changes in average salmon densities within the Polla catchment.

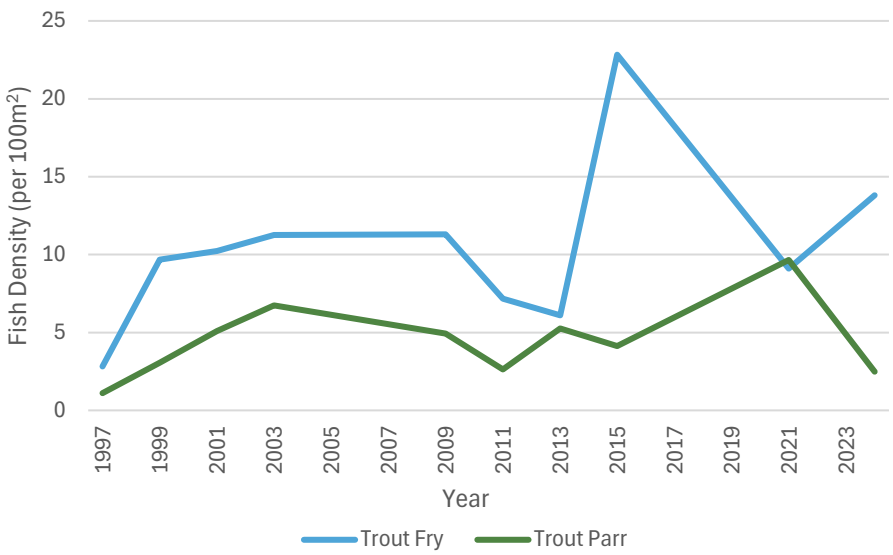


Figure 3.22: Temporal changes in average trout densities within the Polla catchment.

Salmon and trout were present in every site surveyed on the Polla, one in the mainstem and four in tributaries. It was noted that in many places near the main river there was natural tree regeneration, likely due to the estate's deer management lowering the grazing pressure. This is a promising development, as with riparian tree growth comes shade and nutrient input. The catchment could still benefit from targeted planting and improvement works detailed in the catchment management plan.

3.3 Dionard

Table 3.31 shows the grid reference, and location of each site fished. Minimum density estimates of salmon and trout fry (0+ years) and parr (>1 year) per 100m^2 in each site are presented in table 3.32 and classified in accordance with the SFCC classification scheme (table 1).

Table 3.31: Electrofishing site details.

Site Code	Easting	Northing	Situation
DI3	235380	949678	Mainstem Dionard, just below the loch.
DI4	235327	949918	White burn, 50m below bridge.
DI5	235354	950463	Leafy burn, just below bridge.
DI6	234467	952312	Dougal's burn, 20m below bridge, before bend.
DI7	233149	954287	Maggie's burn, from junction with river to top of track.
DI8	231711	956759	Gualin burn, by track between bend and quarry.
DI9	233712	957948	Rhigolter burn, near track just before junction with another tributary.
DI10	233671	958506	Red burn, 15m upstream from main stem, under tree.
DI11	235449	959664	Colonel's burn, from river junction to narrowing of river.
DI12	236052	960491	Allt Ach na Cailce, 10m upstream of watergate, pointed rock to big boulders.

Table 3.32: A summary of the minimum and estimated densities of salmon and trout fry (0+ years) and parr (greater than 1 year) at each site per 100 m^2.

Site Code	Habitat Type	Comments	Minimum Density				Estimated Density			
			Salmon Fry	Salmon Parr	Trout Fry	Trout Parr	Salmon Fry	Salmon Parr	Trout Fry	Trout Parr
DI3	Fry	Poor instream cover, moderate bankside cover	17.58	0.00	2.07	0.00	43.23	0.00	4.47	0.00
DI4	Mixed	Moderate instream cover, poor bankside cover	31.14	8.49	0.00	5.66	76.56	14.72	0.00	12.22
DI5	Mixed	Moderate instream cover, no bankside cover	13.63	36.35	27.26	0.00	33.52	62.99	58.90	0.00
DI6	Mixed	Good instream cover, no bankside cover	24.86	2.76	2.76	0.00	61.12	4.79	5.97	0.00
DI7	Fry	Poor instream cover, moderate bankside cover	10.93	2.19	0.00	2.19	26.87	3.79	0.00	4.72
DI8	Parr	Moderate instream cover, moderate bankside cover	0.00	7.79	7.79	2.60	0.00	13.50	16.83	5.60
DI9	Mixed	Good instream cover, moderate bankside cover	26.79	11.16	2.23	8.93	65.87	19.34	4.82	19.27
DI10	Fry	Moderate instream cover, poor bankside cover	10.19	2.55	1.27	2.55	25.05	4.41	2.75	5.50
DI11	Fry	Moderate instream cover, excellent bankside cover	0.00	0.00	29.56	7.39	0.00	0.00	63.87	15.95
DI12	Fry	Moderate instream cover, poor bankside cover	6.17	6.17	37.04	0.00	15.18	10.70	80.02	0.00

Salmon densities in the Dionard system are mixed, with some tributaries showing good numbers of fish, and others – such as DI8 and DI10 – being poorer. Trout distribution was seen to be similar, with some good and some poorer sites.

The minimum, maximum, and mean minimum densities, and the average estimated density for the catchment can be seen in table 3.33. This summarises the system and allows direct comparison between all surveyed catchments in the West Sutherland area.

Table 3.33: A summary of the minimum estimate densities determined for all sites surveyed (per 100m^2), and the average estimated density.

Species/Lifestage	Minimum	Maximum	Minimum Density Average	Estimated Density Average
Salmon Fry	0	31.14	14.13	34.74
Salmon Parr	0	36.35	7.75	13.42
Trout Fry	0	37.04	11.00	23.76
Trout Parr	0	8.93	2.93	6.33

Figure 3.31 show the temporal fluctuations in the average juvenile salmon and trout densities in the catchment. The Dionard has only been surveyed 3 times since 1996, so it isn't possible to see a trend in the data.

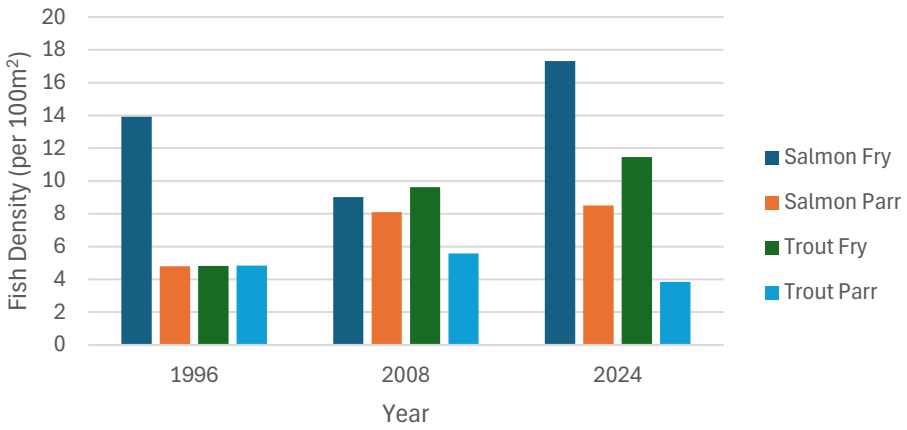


Figure 3.31: Temporal changes in average salmonid densities within the Dionard catchment.

The Dionard has only been surveyed 3 times since 1996, and only twice by WSFT (2008, 2024). As there is so little data available, it is not possible to see a trend in salmonid numbers. This is especially true when the electrofishing kit used is taken into consideration. In each survey a different kit was used, with newer kit improving capture probabilities and thus changing the minimum observed densities. Also, with such large periods of time between surveys sites can change completely between visits, unlike other catchments where surveys are undertaken much more regularly.

Overall, the tributaries of the Dionard are naturally oligotrophic, but lack any significant shading which could become an issue in the future with increasing summer water temperatures.

3.4 Inver

Table 3.41 shows the grid reference, and location of each site fished. Minimum density estimates of salmon and trout fry (0+ years) and parr (>1 year) per 100m^2 in each site are presented in table 3.42 and classified in accordance with the SFCC classification scheme (table 1).

Table 3.41: Electrofishing site details.

Site Code	Easting	Northing	Situation
I11B	215074	924552	Allt an Tiaghaich, immediately upstream of deer fence.
I11C	215235	924380	Allt an Tiaghaich, 250m upstream of deer fence.
I30A	223483	924419	Skiag burn, at road junction.
I32B	224067	923757	Allt a'Chalda Beag, left braid at mouth of loch.
I32C	224130	923869	Allt a'Chalda Beag, upstream of road, below the waterfall.
I33A	224306	923462	Allt a'Chalda Mor, top of right-hand braid.
I4A	212299	923737	Allt na h-Airbhe, at confluence with mainstem.
I4B	212600	923600	Allt an h-Airbhe, in the straight section in the field.

Table 3.42: A summary of the minimum and estimated densities of salmon and trout fry (0+ years) and parr (greater than 1 year) at each site per 100 m^2.

			Minimum Density				Estimated Density			
Site Code	Habitat Type	Comments	Salmon Fry	Salmon Parr	Trout Fry	Trout Parr	Salmon Fry	Salmon Parr	Trout Fry	Trout Parr
I11B	Parr	Good instream cover, no bankside cover	15.31	25.51	0.00	0.00	37.64	44.21	0.00	0.00
I11C	Fry	Excellent instream cover, moderate bankside cover	29.54	18.65	6.22	0.00	72.63	32.33	13.43	0.00
I30A	Mixed	Good instream cover, poor bankside cover	12.55	7.53	5.02	7.53	30.85	13.05	10.84	16.25
I32B	Fry	Poor instream cover, poor bankside cover	0.00	0.00	15.83	0.00	0.00	0.00	34.20	0.00
I32C	Fry	Poor instream cover, excellent bankside cover	0.00	0.00	201.75	43.86	0.00	0.00	435.89	94.66
I33A	Fry	Moderate instream cover, excellent bankside cover	48.70	3.25	6.49	0.00	119.76	5.63	14.03	0.00
I4A	Mixed	Excellent instream cover, moderate bankside cover	30.21	26.85	1.68	2.52	74.28	46.54	3.63	5.43
I4B	Parr	Good instream cover, poor bankside cover	17.19	31.25	3.13	4.69	42.26	54.16	6.75	10.12

Salmon are present in good and excellent densities throughout the Inver catchment, with only I30A showing lower numbers of salmon, and I32B and C showing absence. Trout densities are more mixed, though this is not unexpected as salmon will out-compete trout when they are both present.

The minimum, maximum, and mean minimum densities, and the average estimated density for the catchment can be seen in table 3.43. This summarises the system and allows direct comparison between all surveyed catchments in the West Sutherland area.

Table 3.43: A summary of the minimum estimate densities determined for all sites surveyed (per 100m^2), and the average estimated density.

Species/Lifestage	Minimum	Maximum	Average Minimum Density	Average Estimated Density
Salmon Fry	0.00	48.70	21.93	53.92
Salmon Parr	0.00	31.25	16.15	27.99
Trout Fry	0.00	15.83	5.48	11.84
Trout Parr	0.00	7.53	2.10	4.54

Figures 3.41 and 3.42 show the temporal fluctuations in the average juvenile salmon and trout densities in the catchment. Figure 3.41 shows that despite fluctuation in salmon fry and parr densities the population is stable, showing no decline since the system was first surveyed. Fry densities dip in 2024 but are not out with previous lows. Trout densities also show this stable trend, despite fluctuating year on year.

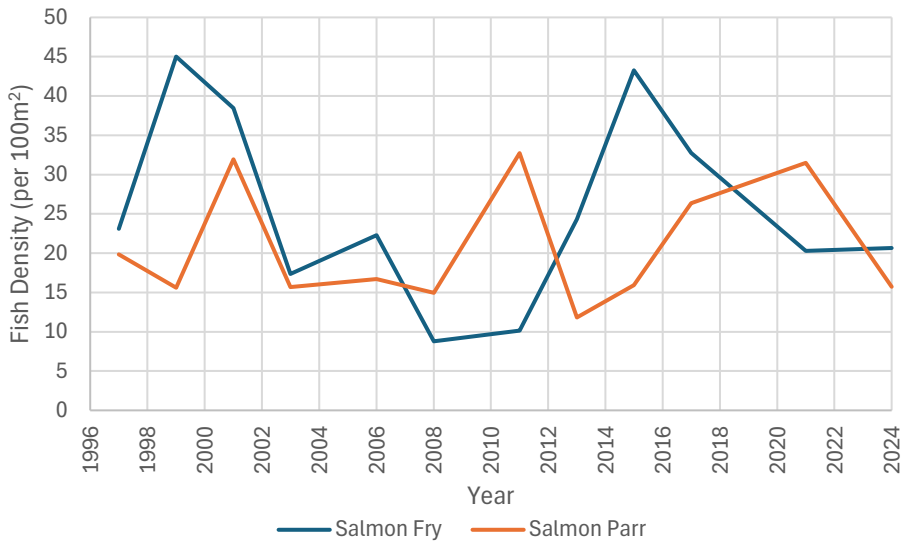


Figure 3.41: Temporal changes in average salmon densities within the Inver catchment.

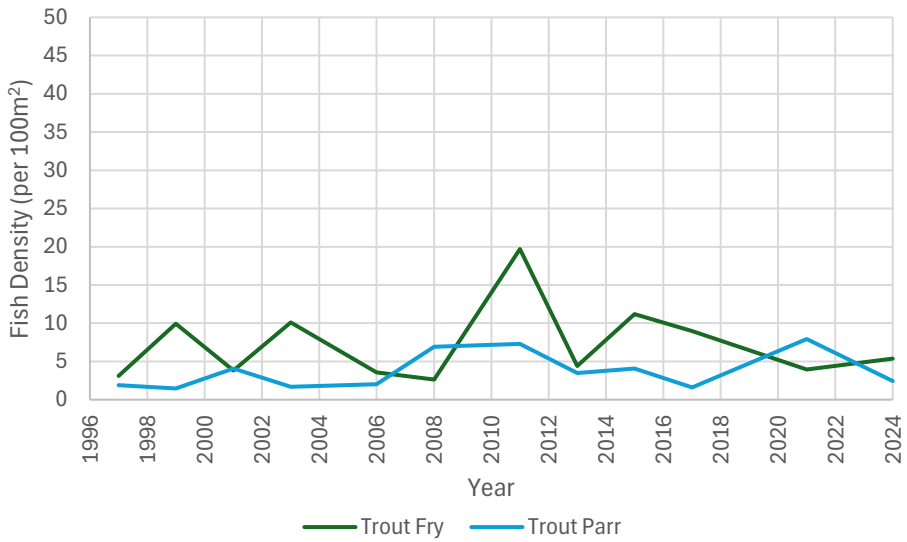


Figure 3.42: Temporal changes in average trout densities within the Inver catchment.

There are certain sites within the Inver catchment where parr numbers are higher than fry which is likely due to site specific habitat types. WSFT surveys a range of habitat types including both optimal and poorer areas for trout and salmon to gain a realistic picture of the population status. Trout populations within the Inver catchment remain at a low but consistent level, while salmon populations appear to be very healthy.

Like many other catchments in the West Sutherland area the Inver tributaries have very little to no tree cover, which could lead to very high summer water temperatures. As such, some targeted planting schemes may be beneficial.

4. Area Summary

The average densities of fish within each catchment are summarised (table 4.1). This allows comparison between the catchments, although it should be noted that temporal changes in density throughout the summer months and habitat differences between catchments are not considered in this table. The timing of sampling is important, with fish moving within the tributaries because of water height and temperature, food availability and size. Thus, sampling after a spate may give a low density as a result of washout, whilst drought may decrease density as fish move into deeper water to avoid predation or desiccation, or may increase density as a result of concentration in severe cases. Similarly, densities will be greater shortly after hatching, reducing with time as the fish grow and require a larger territory for survival.

Figure 4.1: Average minimum densities of juvenile salmonids per catchment.

	Average Minimum Estimated Density (per 100m^2)			
	Salmon		Trout	
Catchment	**Fry**	**Parr**	**Fry**	**Parr**
Hope	7.14	8.01	9.59	7.77
Polla	23.59	10.38	13.81	2.49
Dionard	14.13	7.75	11.00	2.93
Laxford	23.82	6.61	0.76	0.00
Oldany	0.00	0.00	5.80	3.94
Clashnessie	0.00	0.00	6.42	14.35
Inver	21.93	16.14	5.48	2.10
WSFT Area	**12.94**	**6.98**	**7.55**	**4.80**

Figures 4.1 and 4.2 show there is a good distribution of salmonids throughout the West Sutherland area, with trout present in every catchment surveyed. Salmon were not present in Clashnessie or Oldany, though in the case of Clashnessie this was expected. Oldany however is a new development and very worrying. Oldany only has 1.4km of river accessible to migratory fish since the construction of the Loch Poll hydro scheme, which cuts off a significant portion of the catchment and in turn reduces the production capacity of the system. The Oldany salmon population has been in decline for years and would appear to have reached a tipping point where it has collapsed entirely. This is not only a blow for Atlantic Salmon, but also the Freshwater Pearl Mussel populations which are reliant upon juvenile salmonids for the obligatory parasitic stage of their lifecycle. It is unknown whether the Oldany pearl mussels are salmon or trout specialists, or use both species, but until this is determined the situation should be treated as a worst-case scenario.

Salmon and trout fry were found in greater densities than parr in most catchments, as expected. This wasn't the case for salmon in the Hope or trout in the Inver, but this is likely due to the habitats surveyed. Some of the sites in the Hope are known to be inaccessible to salmon, whereas the sites in the Inver were primarily salmon dominated, where trout will be out competed and forced into other areas of the burns.

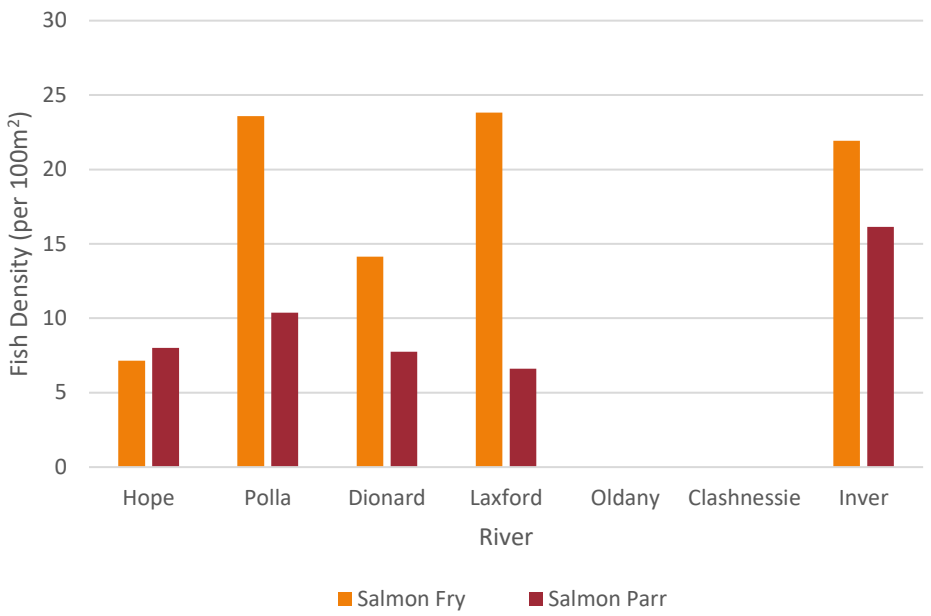


Figure 4.1: Average salmon fry and parr densities within West Sutherland catchments and the West Sutherland area in 2024.

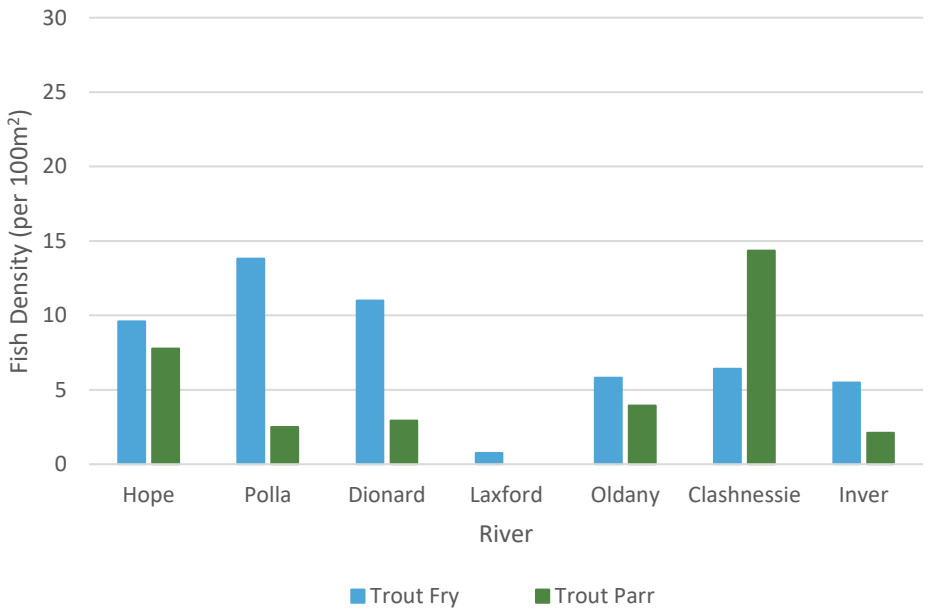


Figure 4.2: Average trout fry and parr densities within West Sutherland catchments and the West Sutherland area in 2024.

Figure 4.3 summarises the classifications of all sites against the SFCC classification scheme for the Northwest area (table 1). 38.45% of all sites support good and excellent densities of salmon fry, with parr classified as good and excellent in 38.45% of sites surveyed. Trout fry were not found in excellent densities in any site in 2024, but were seen in good densities in 33.33% of sites, and 38.45% of sites were found to have good and excellent densities of trout parr.

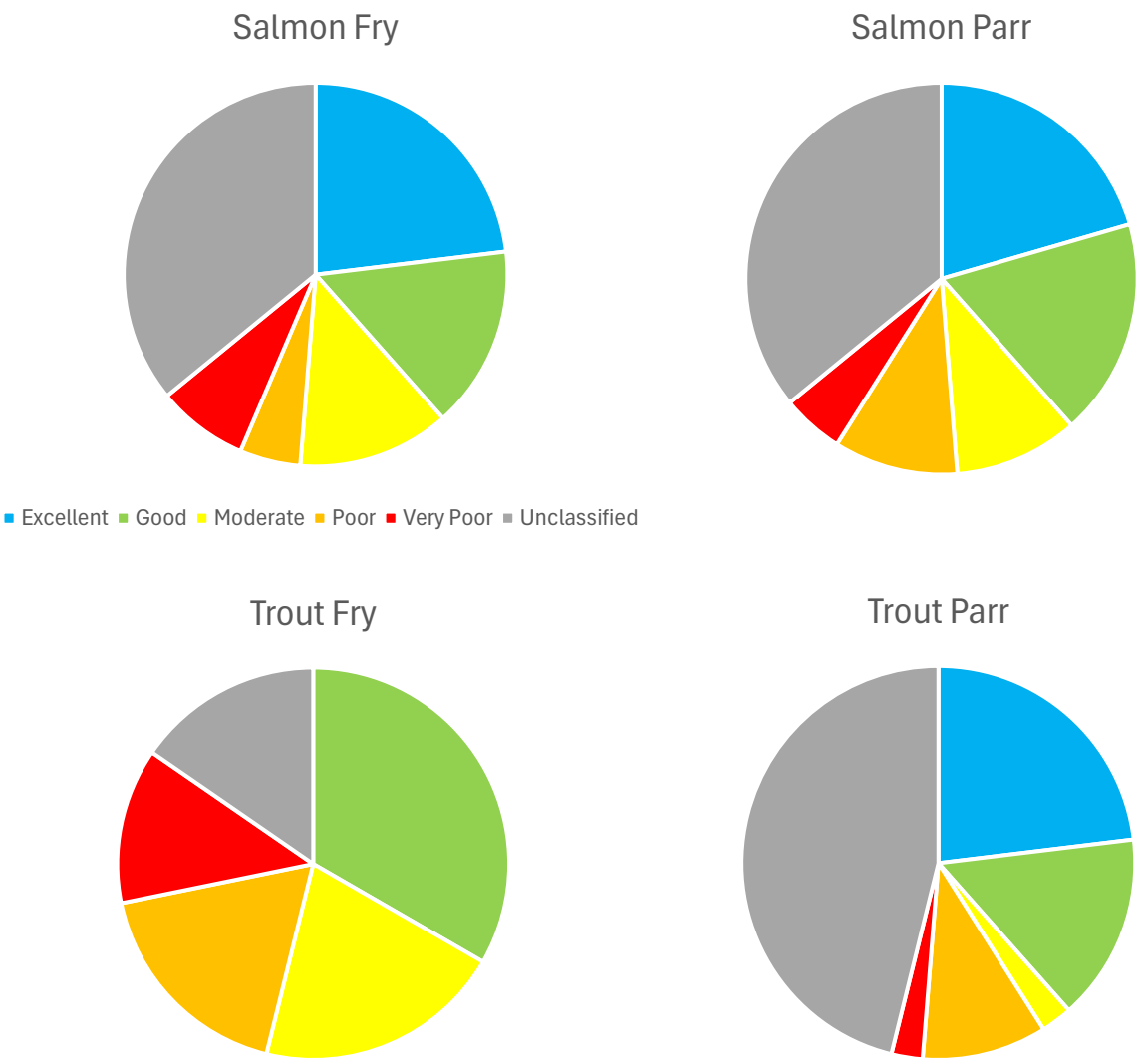


Figure 4.3: West Sutherland area salmonid densities according to the SFCC classification scheme (table 1).

During the catchment surveys other species were found; eels being the most widespread of these (figure 4.4). Eels were observed in 6 of the 7 catchments fished, but only present in all sites in 3 systems. Eels are known to be present in the Inver, but are seldom caught, likely due to the weir and sluice hindering migration. Minnows were only caught in one site in 2024, in the Oldany system. They are a widespread species, so it was unusual to see so few. One stickleback was caught whilst surveying, that being in the Dionard.

Trout were caught in every surveyed catchment, present in every site in 5 systems. Salmon were not quite as widely distributed, only present in every site in 2 of the 5 catchments they were present in.

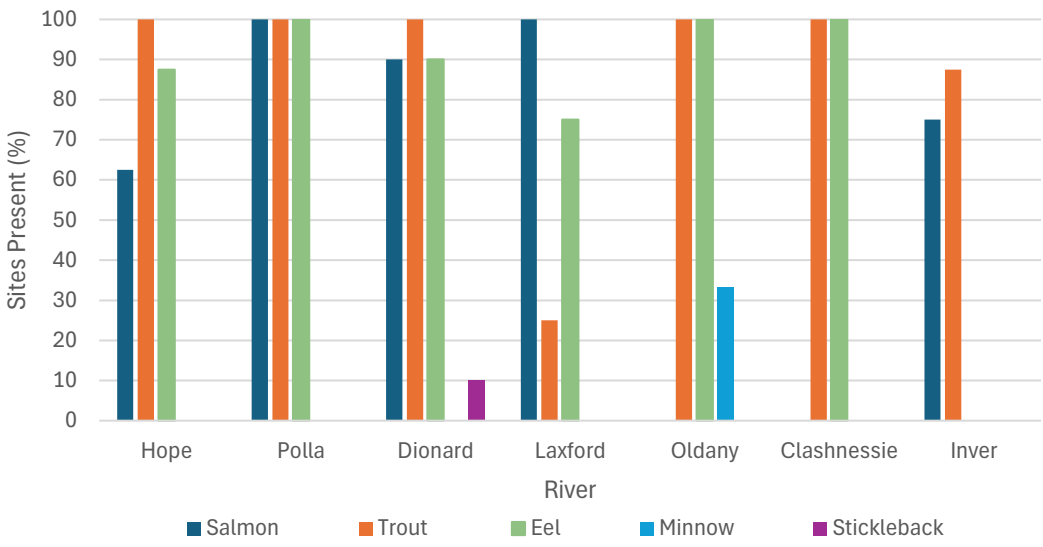


Figure 4.4: Species composition and distribution by catchment.

In 2024, the weather was very wet, with many days called off due to rain or rivers being too high to survey. This was exacerbated by other factors out with the biologists' control which prevented some catchments being surveyed until later in the season. As such, only 7 catchments were fished, down from the 14 that were due to be surveyed.

It was seen in 2024 that no salmon were caught in the Oldany system of any age class, which suggests there has been a persistent lack of successful spawning, multiple years in a row. It is possible that there wasn't enough smolt production generated in the Oldany system, resulting in too few returning adults to sustain the population.

The results show that neither trout nor salmon are dominant overall in 2024. Salmon parr were seen in higher densities than trout parr, which is consistent with data from previous years. Salmon being more populous was expected given the nature and scale of the rivers and burns surveyed, with larger salmon dominated systems targeted due to the challenging weather conditions reducing field days. The results in 2024 could be due to changes in the sites sampled, as well as changes in the overall population dynamics.

Whilst overall instream habitat is favourable for salmonids in the West Sutherland area, it could benefit from strategic planting of broadleaf trees in riparian zones, which would improve cover, food availability, and bankside stability – overall providing great benefits to fish populations.

DISCLAIMER NOTICE

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