



TROUT SURVEYS REPORT 2025

A summary of trout dive surveys conducted by Fish & Game West Coast Region during the 2024-2025 season.

Baylee Kersten, Senior Fish & Game Officer, March 2025.





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Summary

Trout dive surveys have been conducted in the West Coast Fish & Game Region since 1985. The purpose of these surveys is to quantify trout abundance in a particular stretch of river. Where dives have occurred in past years, comparisons can be made. This season the dives were conducted between December 2024 and February 2025, incorporating Fish & Game staff from the West Coast Region alongside local volunteers and West Coast Regional Council staff. The Mawheraiti River (SH7 and Mirfins Bridge), the Inangahua River (Blacks Point), the Grey River (Waipuna and Hospital Flat), the Waitahu River (Gannons Bridge), Larry's Creek (Upper), the Rough River (Upstream from Mill and Mirfin Ford), and the Haupiri River (School site and Upstream of Ahaura) were dived. In general, trout abundance was moderate, with many sites near to their long-term averages. It is recommended to: Continue the trout dive surveys programme as a tool for gathering long term data on West Coast trout abundance. That council receives this report.

Introduction

Dive surveys are commonly used to monitor trout abundance in clear, small to medium sized rivers throughout New Zealand. The West Coast Fish & Game Region's database of trout surveys results dates back to 1985 when MAF conducted a series of dives for their "100 Rivers" survey. Since then, Fish & Game staff with assistance of volunteers have undertaken up to 12 dives per year when river conditions have been favourable.

There is now a large dataset that enables comparison at sites which have been dived multiple times over several years. The data provides a 'spot' count of trout abundance on a particular stretch of a river. The West Coast Region performs dives in relation to specific threats or management information needs and sites are not randomised. Therefore, results in this report should not be used to describe catchment level or regional level observations. The data and findings of the surveys are intended for internal management purposes only.

The majority of West Coast rivers are dived specifically for brown trout (*Salmo trutta*) and unless specifically stated, brown trout are the species referred to as 'trout' or 'fish' in this report. Dive sites are between 1 and 3 km in length. This distance is considered the longest possible to avoid fatigue whilst being long enough to give an estimate of the actual population for that stretch of river.

This season trout dive surveys were undertaken to build on existing long-term datasets and to assess the abundance and distribution of fish in rivers with perceived threats from development or unsustainable fishing practices. Specifically:

- 1) The Mawheraiti River and the Inangahua River were dived to monitor the impact of catchment development.

- 2) The Grey River at Hospital Flat was dived to monitor the impact of perceived high angler usage on a highly valued section of river near the Grey River Water Conservation Order.
- 3) The Grey River at Waipuna was dived to monitor the middle reaches of one of the West Coast's most fished river catchments.
- 4) The Waitahu River, Rough River and Larry's Creek were dived to monitor the impact of high angler usage observed within the Reefton Area.
- 5) The Haupiri River was dived following on from last year's survey of Lake Haupiri to assess the trout population in the Haupiri catchment.

Method

A team of divers wearing wetsuits, bootees, flippers, gloves, masks and snorkels drift downstream from a designated start point and count any trout that they pass before a designated end point is reached. To ensure accurate counts the following rules are observed:

- 1) A designated lead diver monitors and instructs the divers to maintain a straight line across the river.
- 2) Only trout that pass directly underneath, or to a predetermined side of a diver, are recorded.
- 3) Where large schools of fish move rapidly back upstream divers communicate to clarify the number, size class and who has counted them.

Before a dive is undertaken water clarity is measured by recording the distance in metres a 200mm black disc can be observed horizontally through the water column. Good water clarity is required for accurate counts therefore diving is not undertaken if visibility is less than 4m. More divers are required if water clarity is low to ensure adequate coverage, ideally visual contact can be maintained between divers.

Trout are divided into three size groups;

Large: Trout over 450mm in length.

Medium: Trout less than 450mm and greater than 150mm in length.

Small: Trout less than 150mm in length.

Fish numbers are recorded by each diver, with the team leader collecting the information from each diver periodically throughout the dive and/or on completion of the dive.

Results

Mawheraiti River (Mirfins Bridge)

This season the dive at Mirfin's Bridge was completed on 3 December 2024. The dive resulted in a count of 41 small/km, 25 medium/km and 15 large/km. A below average count, due to a lack of medium trout, with small and large numbers near to average.

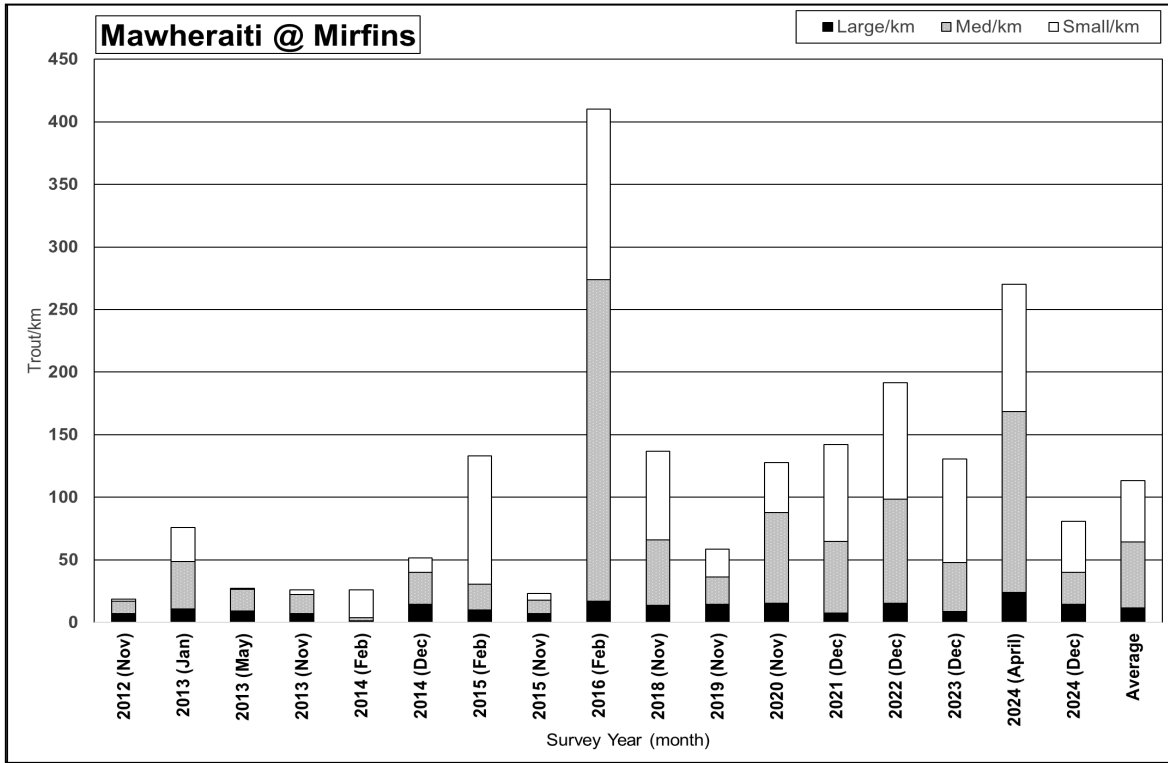


Fig 1. Number of Brown Trout recorded during trout dive surveys at the Mawheraiti River Mirfins Bridge site 2012-2024.

Mawheraiti River (SH7 Bridge)

This season the dive at SH7 bridge was completed on 3 December 2024. This dive resulted in a count of 75 small/km, 48 medium/km and 10 large/km. Numbers of large and medium were below average while small trout numbers were average.

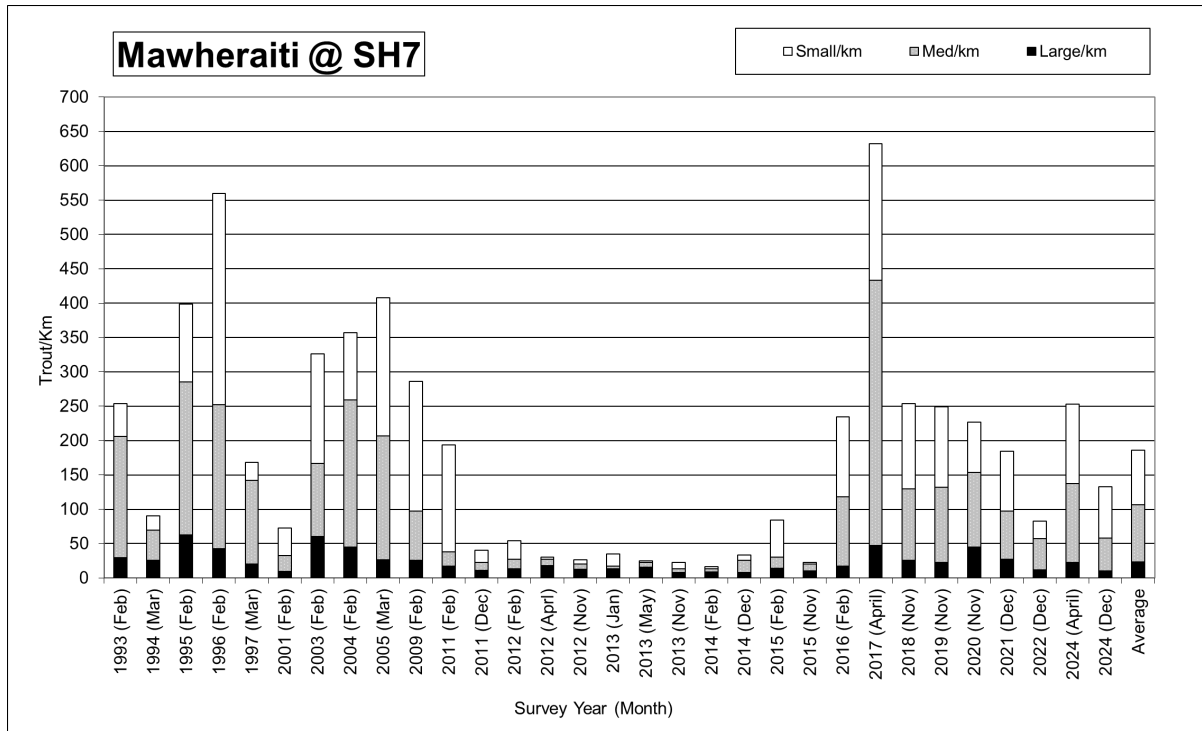


Fig 2. Number of Brown Trout recorded during trout dive surveys at the Mawheraiti River SH7 Bridge site 1993-2024.

Inangahua River (Blacks Point site)

This season the dive at Black's Point on 3 February 2025 resulted in a count of 177 small/km, 52 medium/km and 5 large/km. Trout numbers in all three size classes were below average.

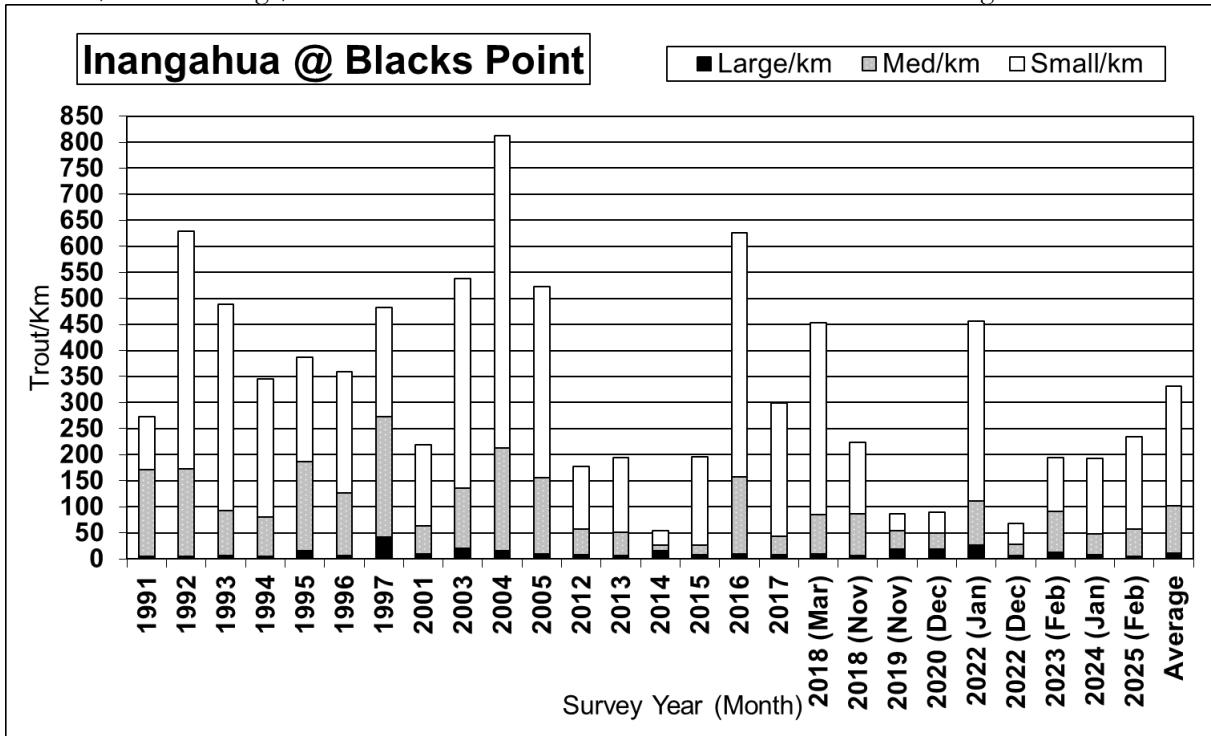


Fig 3. Number of Brown Trout recorded during trout dive surveys at the Inangahua River, Blacks Point site 1991-2025.

Grey River (Hospital Flat)

This season the dive at Hospital Flat on 3 February 2025 resulted in a count of 7 small trout/km, 6 medium trout/km and 7 large trout/km. Trout numbers in all three size classes were below average.

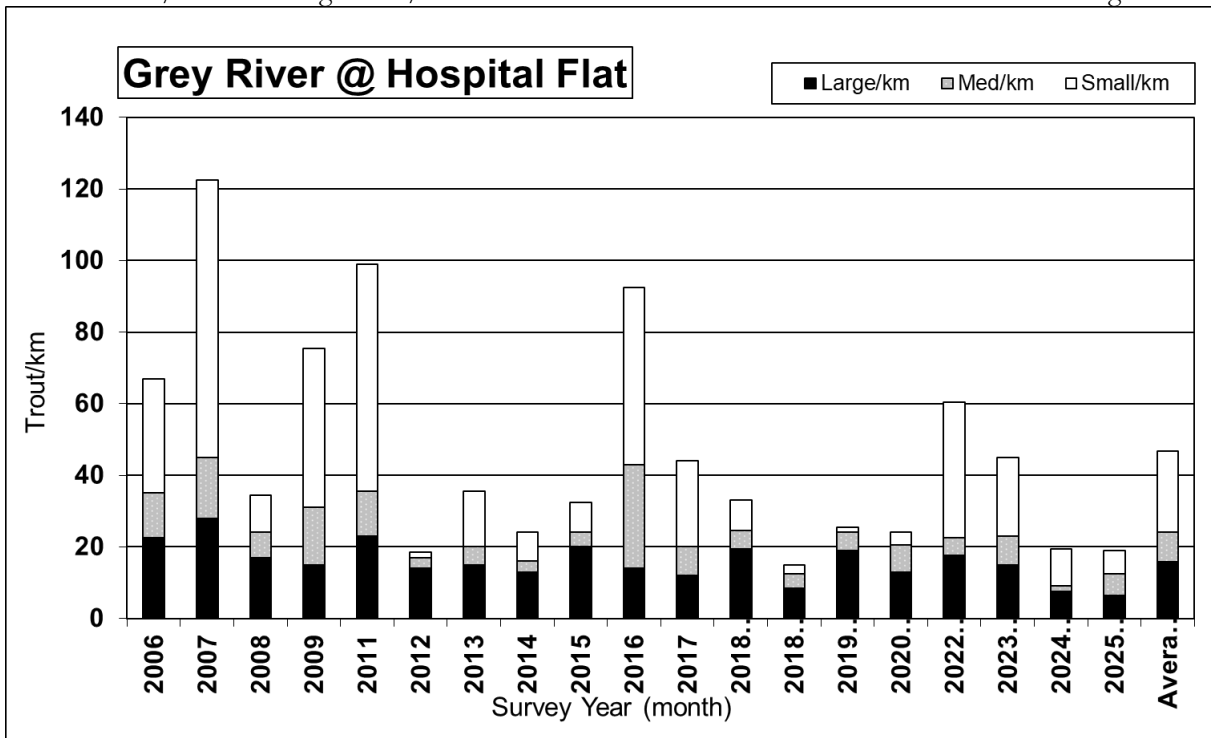


Fig 4. Number of Brown Trout recorded during trout dive surveys at the Upper Grey River, Hospital Flat 2006-2025.

Grey River (Waipuna site)

This season the dive at Waipuna on 10 February 2025 resulted in a count of 103 small/km, 97 medium/km and 25 large/km. Number of fish were above average in all three size classes.

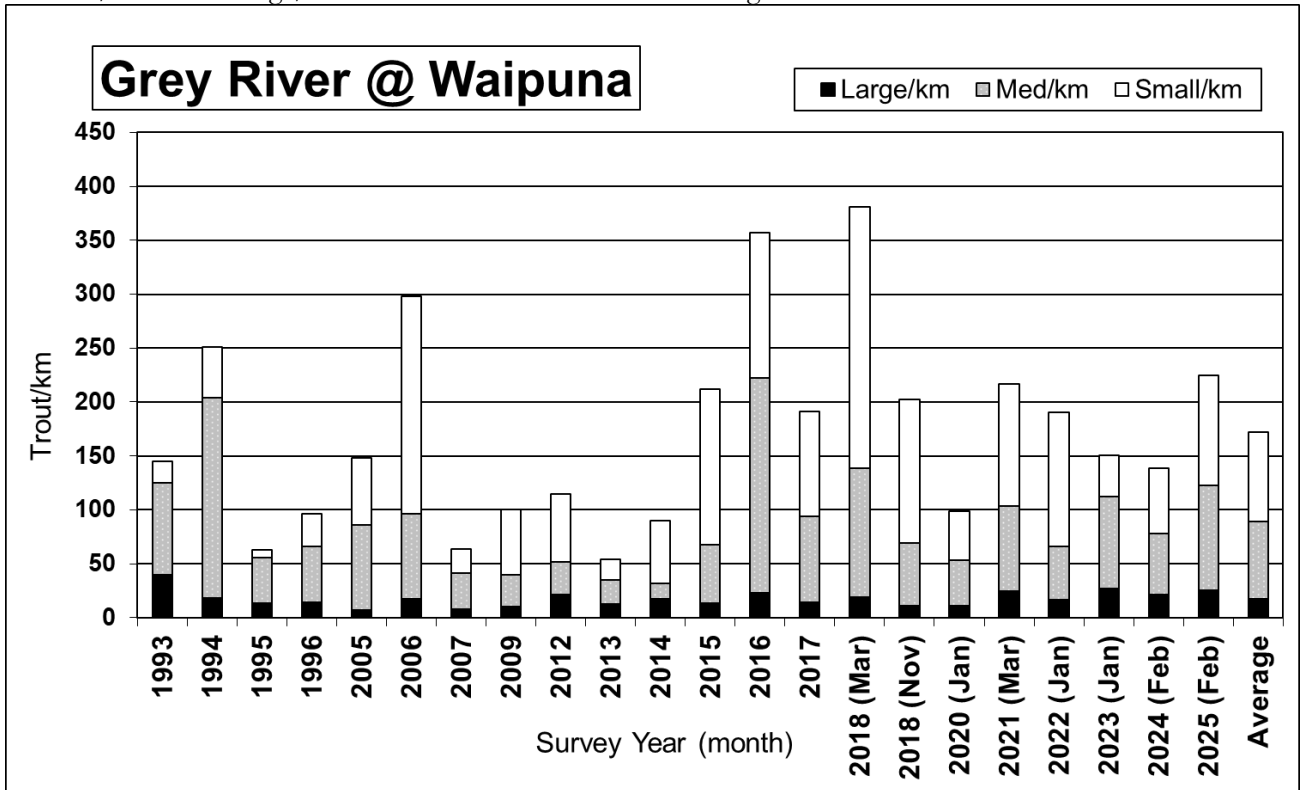


Fig 5. Number of Brown Trout recorded during trout dive surveys at the Grey River, Waipuna 1993-2025.

Larry's Creek

This season the dive at Upper Larry's Creek on 24 February 2025 resulted in a count of 19 small/km, 12 medium/km and 7 large/km. The count was average, with high numbers of medium fish compensating for the below average number of large trout.

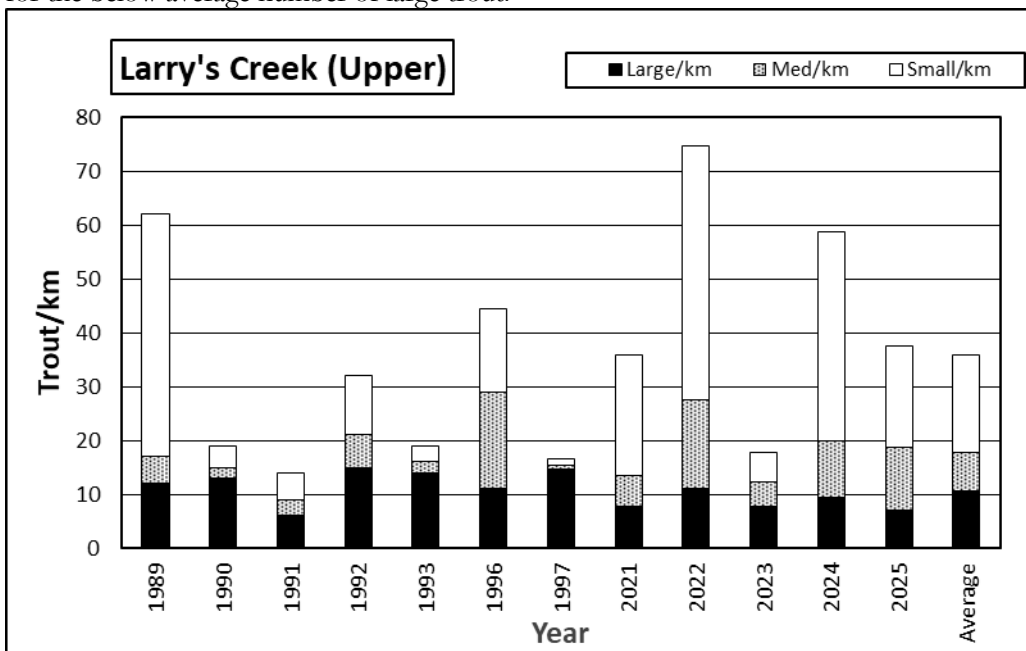


Fig 6. Number of Brown Trout recorded during trout dive surveys at Larry's Creek, upper site 1989 - 2025.

Waitahu River

This season the dive at the Waitahu River on 24 February 2025 resulted in a count of 28 small/km, 9 medium/km and 8 large/km. Numbers of large trout were above average while medium and small trout were below average.

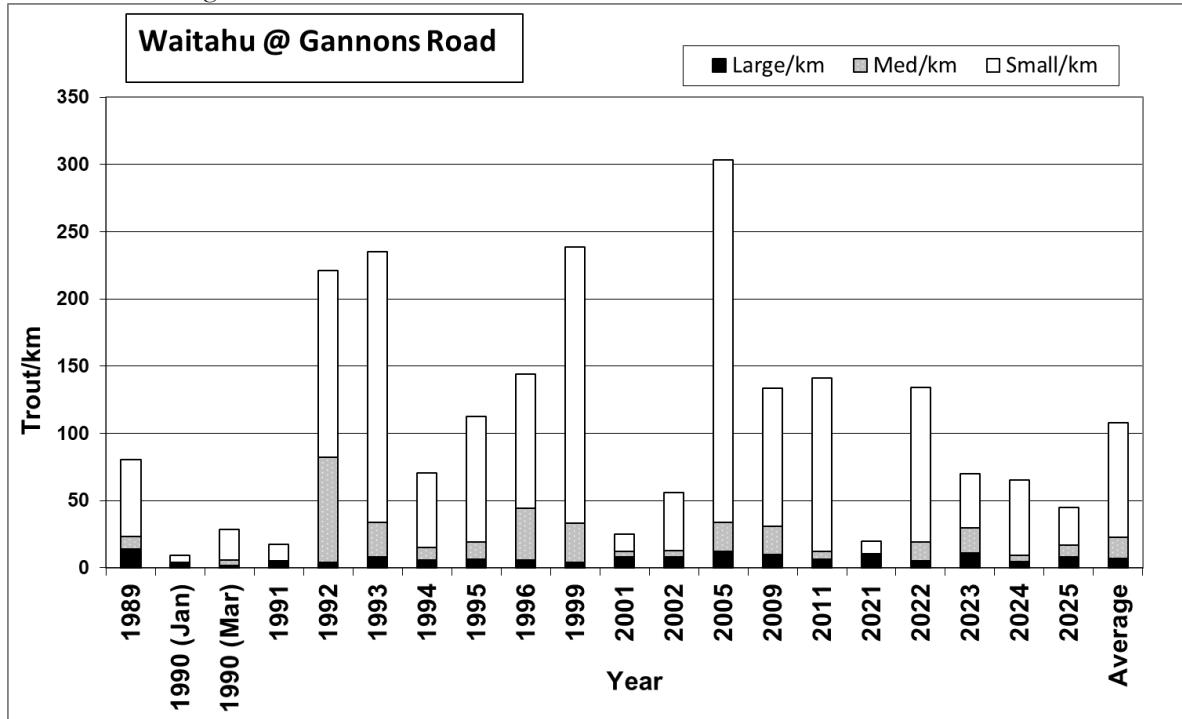


Fig 7. Number of Brown Trout recorded during trout dive surveys at the Waitahu River, Gannons Bridge 1989 - 2025.

Rough River (Upstream of Mill)

This season the dive at the Rough River, Upstream of the Mill site on 11 December 2024 resulted in a count of 14 small/km, 7 medium/km and 19 large/km. The count of all three size classes were near to average.

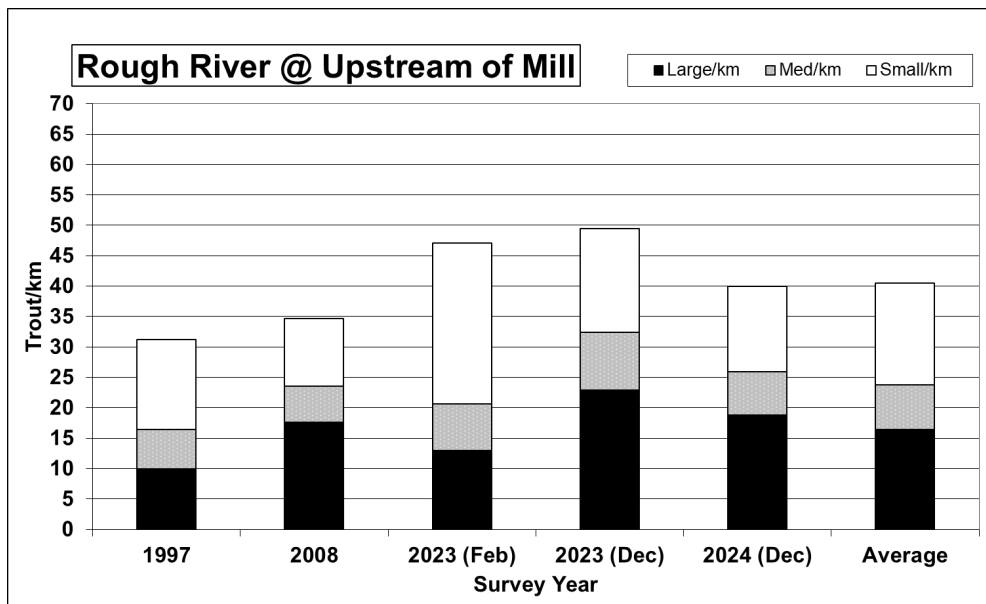


Fig 8. Number of Brown Trout recorded during trout dive surveys at the Rough River, upstream from the old sawmill site 1997 – 2024.

Rough River (Mirfins Ford)

This season the dive at the Rough River, Mirfin Ford site on 11 December 2024 resulted in a count of 13 small/km, 13 medium/km and 23 large/km. Numbers of large and medium were below average while the small count was average.

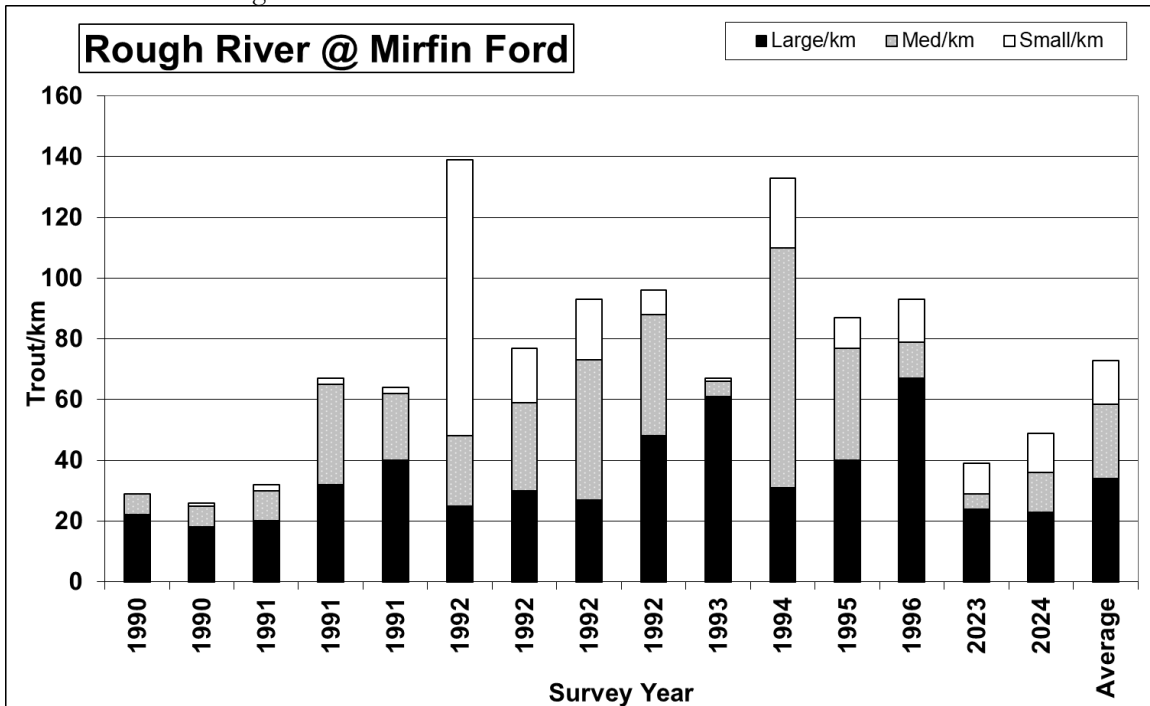


Fig 9. Number of Brown Trout recorded during trout dive surveys at the Rough River, Mirfin Ford 1990 – 2024.

Haupiri River (School)

This season the dive at the Haupiri River, School site on 28 February 2025 resulted in a count of 60 small/km, 49 medium/km and 17 large/km. Numbers of large trout were average while numbers of small and medium trout were above average.

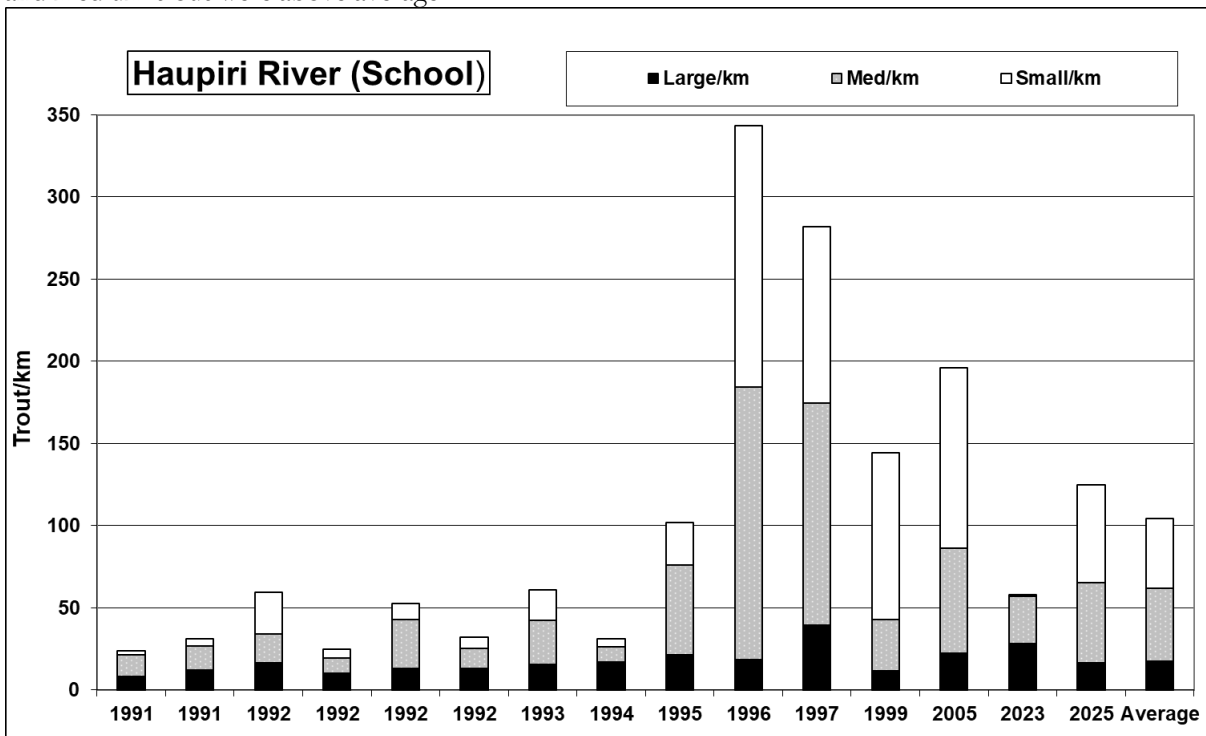


Fig 10. Number of Brown Trout recorded during trout dive surveys at the Haupiri River, School site 1991 – 2025.

Haupiri River (Upstream of Ahaura)

This season the dive at the Haupiri River, Upstream of Ahaura site on 28 February 2025 resulted in a count of 5 small/km, 8 medium/km and 25 large/km. Numbers of large trout were down on last year’s count while small and medium fish umbers were up.

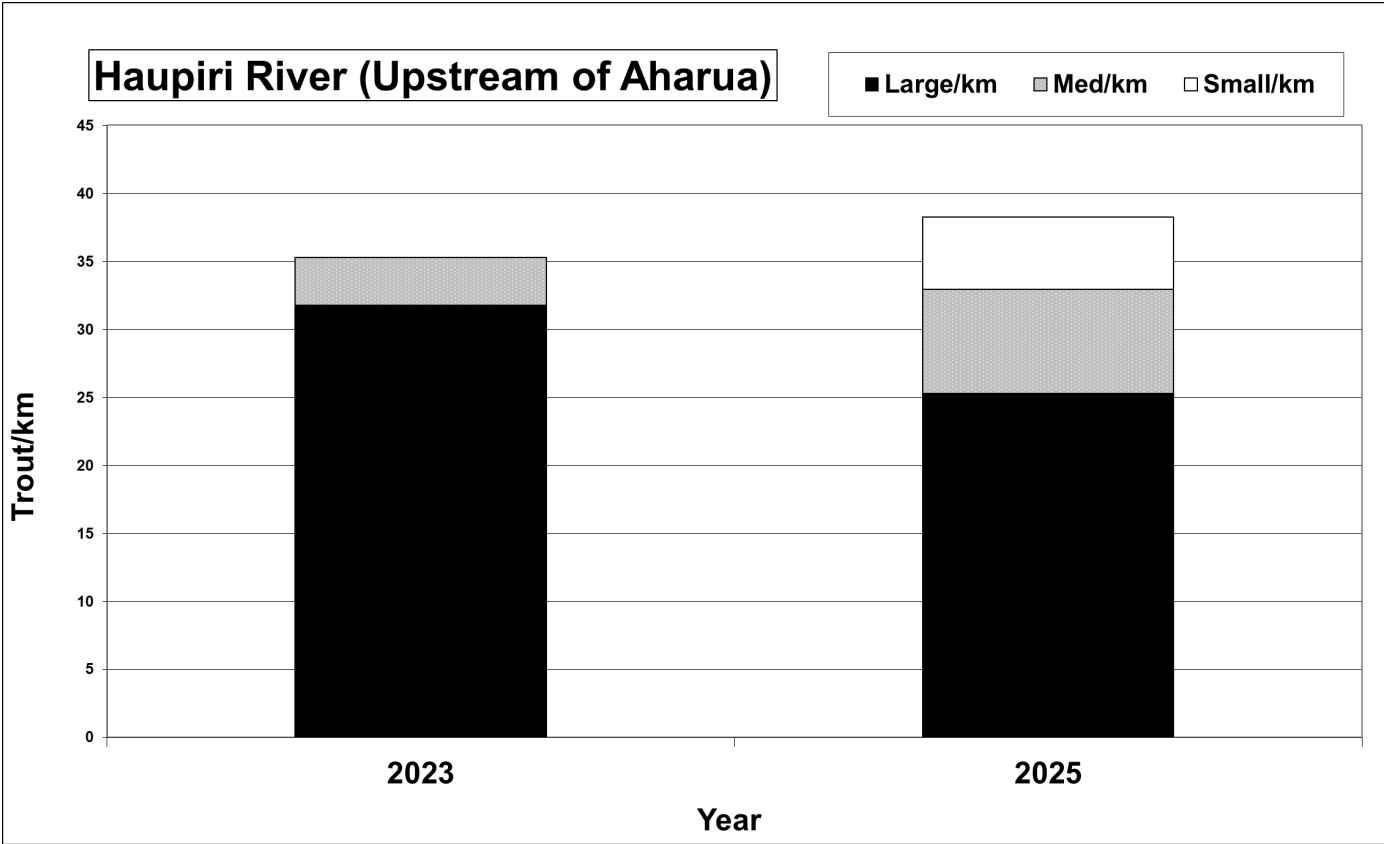


Fig 11. Number of Brown Trout recorded during trout dive surveys at the Haupiri River, Upstream of Ahaura site 2023 – 2025.

Discussion

The dives conducted on the Mawheraiti River resulted in below-average counts. However, when compared to the typical November/December counts, the results were within the expected range, as lower counts are usually observed early in the season. The research project in the Mawheraiti catchment indicated that the 2023-24 recruitment year’s productivity was below average, which accounts for the low numbers of small trout expected at both sites.

In the Reefton area, including Larry’s, Waitahu, and Inangahua rivers, trout numbers were moderate, and the rivers appear to have recovered well from the flooding experienced in February 2022. The number of medium-sized trout at each site has increased, likely as a result of the high number of small trout observed during last year’s dives. Additionally, anglers have reported good numbers of young fish in the Inangahua system, suggesting it is recovering effectively.

The results from the two dive sites on the Grey River showed mixed outcomes. The upper Grey site had counts well below average, particularly in the large size class. This area remains popular with non-resident anglers and guides, so it’s important to continue monitoring this area. In contrast, the Grey Waipuna site recorded above-average counts, with strong numbers in all three size classes.

At the Rough River, the old Mill site yielded an average count, while the upstream site at Mirfins Ford fell short of its long-term average. The Mirfins Ford site is only one kilometre long and has not been dived in 27 years prior to last year, so habitat changes over this long period could explain the lower trout numbers observed.

The Haupiri River dives, conducted in February this year, showed an increase in the presence of small trout, which were largely absent during last season's December dive. The school site recorded above-average counts, while the downstream site showed similar results to the previous year, with a slight increase in numbers but fewer large trout.

Staff Recommendations

- Continue the trout dive surveys programme as a tool for gathering long term data on West Coast trout abundance.
- That council receives this report.

Acknowledgements

To the following staff and volunteers who helped with the dives a big thank you: Dean Kelly, Dan Scoltock, Emily Rutherford-Jones, Koen Beets, Tim Dawe, Chris Kerton, Janae Fitzgerald, Luken Bisley, and Phil Davies.

References

Unwin, M.J. (2016). Angler usage of lake and river fisheries managed by Fish & Game New Zealand: Results from the 2014/15 National Angling Survey.

Appendix 1: Raw data from trout dive surveys sites dived in 2024/2025

RIVER	LOCALITY	YEAR	DATE	GRID REF	DIST (km)	WIDTH (m)	Vis (m)	LARGE	MEDIUM	SMALL	TOTAL	# DIVERS
Grey R	Hospital Flat	2025	03/02/2025	152/529 - 152/529	2	20	10	13	13	13	38	6
Grey R	Waipuna	2025	10/02/2025	085/735 - 064/748	3	40	7.1	76	291	308	675	8
Hauptiri R	School	2025	28/02/2025	045/473 - 059/479	2.1	30	5	35	102	125	262	6
Hauptiri R	Upstream of Ahaura	2025	28/02/2025	104/516 - 110/528	1.7	30	7.5	43	13	9	65	6
Inangahua R	Blacks Point	2025	10/02/2025	179/962 - 176/973	1.7	18	6.8	9	88	301	398	6
Larry's Creek	Upper	2025	24/02/2025	230/075 - 214/082	1.7	12	12	12	20	32	64	4
Mawheraiti R	SH7 Bridge	2024	03/12/2024	043/892 - 033/878	1.7	20	4	17	82	127	226	6
Mawheraiti R	Mirfins Bridge	2024	03/12/2024	005/809 - 987/796	1.3	20	4	22	38	61	121	6
Rough R	Mirfin Ford	2024	11/12/2024	978/878 - 984/867	1	20	10	23	13	13	49	6
Rough R	Upstream of Mill	2024	11/12/2024	230/075 - 214/082	1.7	20	10	32	12	24	68	6
Waitahu	Gannons	2025	24/02/2025	205/023 - 192/027	1.6	18	9.7	13	14	45	72	4