Fisheries Performance Assessment – Summary Report
Little Pine Lagoon October 2025

Introduction

In response to angler concerns regarding unusually low catch rates, a small-scale electrofishing survey was conducted at Little Pine Lagoon in October 2024 to assess the brown trout population. A follow-up survey was undertaken on 13 October 2025. This report presents the findings from the 2025 survey and where appropriate, includes a comparative analysis with the 2024 results.

The primary objectives were to evaluate catch per unit effort (CPUE), assess the population's length structure and examine fish condition. Historical catch data was also reviewed to provide additional context.

Note: The electrofishing unit's on-time counter was non-functional during the 2025 survey. On-time was estimated at 3.5 hours, equivalent to 12,600 seconds.

Method - 2025

Brown trout were captured using a Smith-Root electrofishing boat, targeting shoreline, riverbed, and inflow habitats across approximately 7.9 km of Little Pine Lagoon (Figure 1). The estimated electrofishing on-time was 12,600 seconds (~3.5 hours). All brown trout captured were weighed and measured for fork length (±1 mm).

Figure 1: Area electrofished during the survey, 13 October 2025.

In-Lake Survey Results

A total of 42 brown trout were captured during the 2024 survey, compared to 16 in 2025. The 2025 sample comprised one female, two males, and thirteen juveniles. Additionally, several juveniles were stunned by electrofishing but could not be netted. Fish lengths ranged from 103 mm to 524 mm (Figure 2), with an average fork length of 205 mm and an average weight of 243 g.

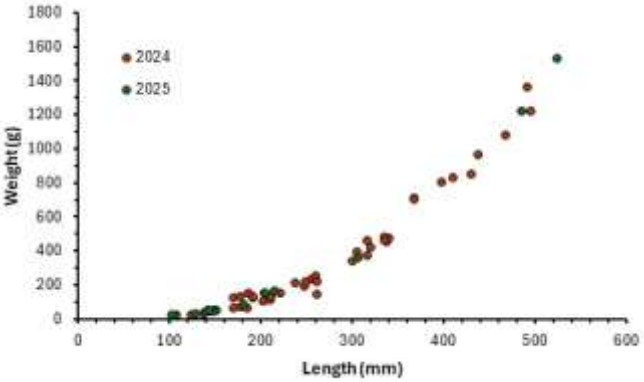

Figure 2: Length and weight for brown trout, Little Pine Lagoon 2024 and 2025.

During 2025, twenty five percent of the fish were in excellent condition, 63 percent good and 13 percent fair with no fish in poor condition. Percentage wise, this represents a slightly better result compared to 2024 (Figure 3).

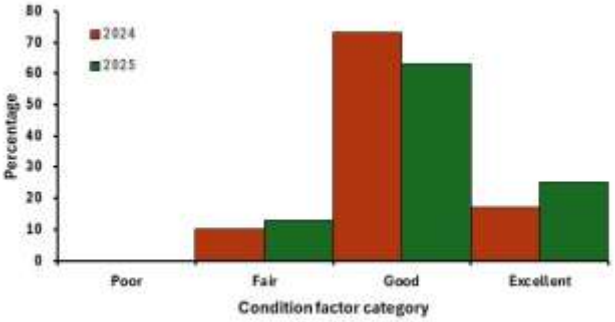

Figure 3: Condition factor categories for brown trout, Little Pine Lagoon 2024 and 2025.

Boat electrofishing in 2024 yielded a CPUE of 19.9 fish per hour (42 fish captured). In contrast, the 2025 survey recorded a CPUE of 4.6 fish per hour (16 fish captured), representing a 77% decrease in catch rate between surveys.

The 2025 survey revealed strong recruitment from the 2024 spawning season, with a high proportion of one-year old fish and a small number of two-year olds from the 2023 cohort. In comparison to the 2024 survey, very few fish over 300 mm were recorded. However, two individuals exceeded 500 mm in length that were not observed during the previous survey. Overall, the 2025 length frequency distribution was dominated by juvenile fish, whereas the 2024 data showed a broader spread of size classes, including significantly more mature individuals. (Figure 4).

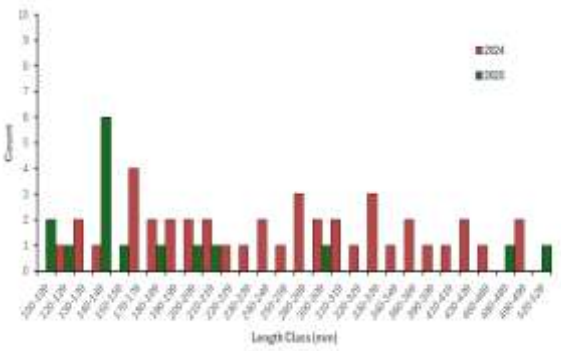

Figure 4: Number of brown trout in each 10 mm length class, Little Pine Lagoon 2024 (n=42) and 2025 (n=16).

Angler Postal Survey 2000-2025

Since the 2000-01season, on average 9.3 percent of all licensed anglers (2,572 anglers) fished at Little Pine Lagoon each season. This number varied from a low of 1,863 to a high of 4,074 anglers.

The average number of days collectively fished by all anglers per season (fishing effort), was 8,430. The maximum effort occurred during 2020/21 with 13,678 days fished, while in 2005/06 this was 5,422 days (Figure 5).

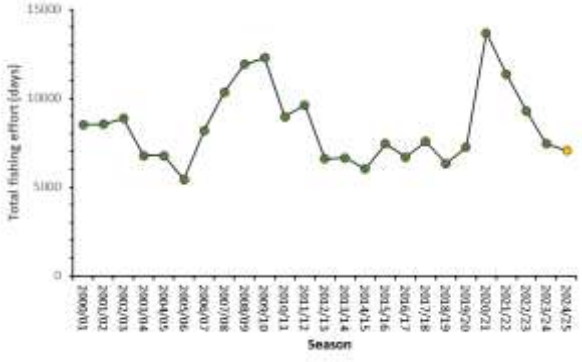

Figure 5: Total fishing effort for each season 2000-2025 *(2024/25 generated from digital returns).*

The average catch rate per day for brown trout was 1.3, with a high of 2.0 during 2023-24 and a low of 0.5 during 2024/25 (Figure 6).

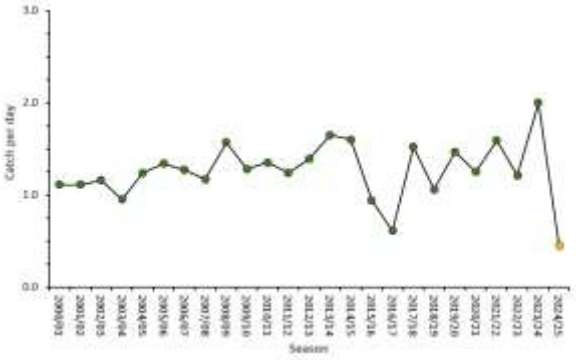

Figure 6: Catch per day of brown trout, Little Pine Lagoon 2000–2025 *(2024/25 generated from digital returns).*

The estimated average seasonal harvest of brown trout was 10,398, with a high of 18,719 during 2008/09 and a low of 3,474 during 2024/25 (Figure 7).

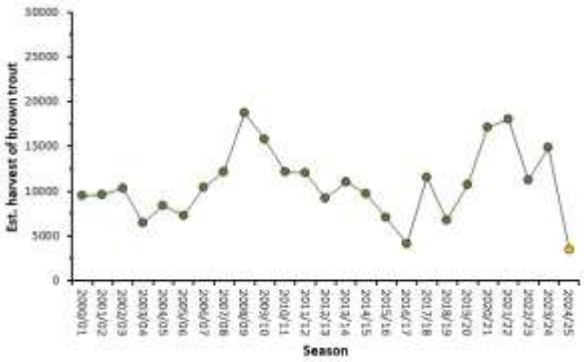

Figure 7: Estimated harvest of brown trout, Little Pine Lagoon 2000-2025 *(2024/25 generated from digital returns).*

Creel Interview Summary 2024-25

During the 2024-25 season, 17 anglers were interviewed regarding their days fishing at Little Pine Lagoon. Only those anglers fishing three or more hours were included in the analysis, resulting in eight valid records. These anglers fished a total of 53 hours, catching 5 brown trout. Based on a full days fishing being equivalent to six hours, the daily catch rate for brown trout was 0.56.

There were insufficient creel records from the commencement of the 2025-26 angling season to analyse.

Angler Diary Summary 2024-25

During the 2024-25 season, there were 32 valid records entered by anglers into the Angler Diary

App (including both nil and multiple fish captures) for fishing at Little Pine Lagoon. Of these records, 23 met the criteria of fishing for three or more hours. These 23 records were attributed to 20 individual trips, with an average trip being four hours. The total number of brown trout captured was eight, with three of these released (37%). Total fishing effort was 92.5 hours. Based on the assumption a full days fishing is six hours, this is equal to 15.4 days. The average daily catch of brown trout reported from the Angler Diary, for anglers fishing three or more hours is, 0.51 brown trout per day.

There were insufficient diary records from the first three months of the 2025-26 angling season for analysis of fishing effort and catch data.

Discussion

During the 2024 survey, a notable decline in brown trout abundance was observed, particularly among larger individuals. However, there were indications of successful recruitment from the preceding spawning season.

For the 2025 survey, overall brown trout numbers remained low, with very few individuals exceeding 220 mm length. There was good evidence of recruitment from the 2024 spawning period, with a high proportion of juvenile brown trout in the 100–160 mm size range and a presence of fish in the 180–220 mm range, originating from 2023 recruitment.

Catch records for the commencement of the 2025-26 season were limited, so only the records post the 2025-26 season were reported. These indicated a marked decline in catch rate, harvest and fishing effort during the 2024-25 season, which appears to have continued into the first three months of the 2025-26 angling season.

Given the positive recruitment observed in 2024 and the presence of a healthy number of two-year-old brown trout, the long-term viability of the trout fishery appears secure. However, catch rates are expected to remain low during the 2025–26 and 2026–27 seasons, with average fish size likely to remain relatively small until the 2027–28 season. Encouragingly, fish condition is anticipated to range from good to excellent.

It remains uncertain whether adjusting bag and size limits would meaningfully accelerate the recovery of the fishery to acceptable levels given the number of juvenile fish. Moreover, given the likelihood of continued good natural recruitment under favourable conditions, artificial stocking is not recommended, as it may undermine the long-term ecological integrity and overall quality of the fishery.

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