



Seven Creeks Fish Survey 2023



Key points

- A total of 494 fish were captured, including 249 Trout cod and 161 Macquarie perch.
- The long-term monitoring reach between Gooram Falls and Galls Gap Road continues to be the stronghold for both Trout cod and Macquarie perch.
- To strengthen and preserve Macquarie perch genetic diversity small scale translocations are being undertaken between populations in the Goulburn-Broken Catchment.

Seven Creeks is unique as it sustains populations of two nationally endangered fish species - Macquarie perch and Trout cod. Both species are found in a 15 km section of the Seven Creeks between Polly McQuinns weir and just below Galls Gap Road. Fish surveys are undertaken regularly to monitor these important fish populations.

Survey sites

In February 2023, the standard 32 sites were surveyed using both electrofishing and fyke nets. This included nine sites downstream of Galls Gap Road Bridge, 19 sites between Gooram Falls and Galls Gap Road (long term monitoring reach) as well as four sites above Gooram Falls. All fish captured were measured for total length (mm) and the larger bodied fish were also weighed.

Seven Creeks naturally fluctuates between periods of drought and periods of flooding. The extremely low and cease to flow events, such as those of the Millenium drought and 2015/2016, and again in 2019; had detrimental impacts on native fish populations. Since March 2020 flows have been higher and have persisted over the summer months. These higher flows have improved water quality, habitat connectivity and food supply; all critical for fish recruitment and survival.

In 2022 a very wet winter resulted in high stream flows and flooding across many catchments. Flooding can bring many benefits, such as an increased in food resources for native fish. However floods can also cause the proliferation of exotic species such as carp and redfin, a reduction in egg survival and displacement of eggs and/or recruits and the loss of instream habitat due to the movement of sediment; particulaly sand in the case of Seven Creeks.



Results

During the 2023 surveys 494 fish were captured or observed, with native fish accounting for 92% of the total catch (Table 1).

Common Name	Below Galls Gap Road - 1 km, 9 sites	Galls Gap Rd to Gooram Falls - Long term monitoring reach	Above Gooram Falls (4 sites)	Total
Trout cod	13	180	56	249
Macquarie perch	18	127	16	161
River blackfish	1	9	9	19
Two-spined blackfish				0
Golden Perch	3	4		7
Mountain galaxias	3	17		20
Australian Smelt				0
Carp gudgeon		1		1
Southern pygmy perch				0
Common yabby	y	y	y	0
Freshwater crayfish				0
Common long-neck turtle			y	0
Platypus			y	0
Carp*	9	11		20
Goldfish*				0
Redfin*	2	11	2	15
Brown trout*		2		2
Mosquitofish*				0
Total	49	362	83	494
*exotic species				

Table 1. Fish and fauna capture 2023

Macquarie Perch

A total of 161 Macquarie perch were detected during the surveys with the majority (127) captured in the long-term monitoring reach (Galls Gap Road to Gooram Falls). This is the highest number detected in this reach since 2017 indicating that the population continues to recover from previous low flow events in 2015/2016 and 2019 (Figure 1). The increase in abundance was driven by higher numbers of adult/sub adult fish being 200mm or more in length. As was the case in 2021 and 2022 low numbers of fish less than one-year old were detected indicating poor recruitment. High flows during the breeding season (spring/early summer) are known to negatively impact recruitment success.

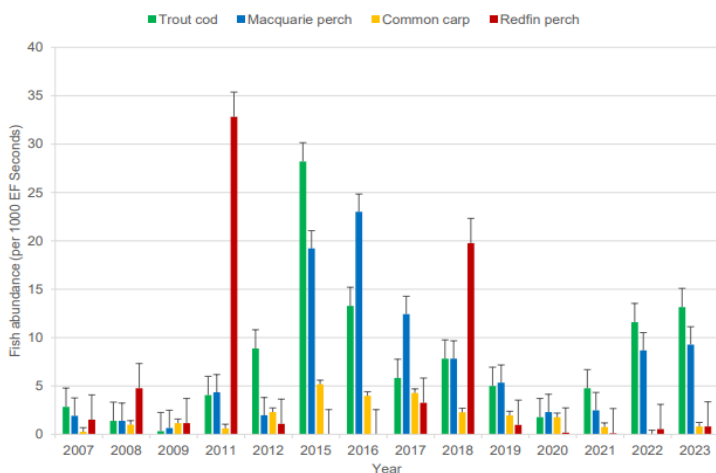


Figure 1. The standardised abundance of Trout cod, Macquarie perch, carp & redfin in Seven Creeks at the long-term monitoring site (Galls Gap Rd to Gooram Falls) between 2007 and 2023.

Trout Cod

The numbers of Trout cod have also increased. Of the 249 individuals captured, 180 were found in the long-term monitoring reach (Figure 1). This is the highest number recorded in this reach since 2016 which indicates that the higher flows have positively impacted Trout cod recovery from the low and cease to flow events in 2015/2016 & 2019. The increase in abundance of Trout cod in 2023 is due to an increase in juvenile fish (more than one year old) indicating good spawning and survival conditions.



Photo 2. Young of year Trout cod.

Macquarie Perch translocations

Once widespread, Macquarie perch are now absent from much of its former range with remaining populations relatively small and isolated. There are 11 known populations remaining in Victoria, including the one in Seven Creeks. Due to the size and isolation of the remaining populations most have low genetic diversity. To improve gene flow and increase their ability to adapt and survive, small-scale translocations between populations has been recommended. More information on gene flow and translocations can be found [here](#).

In February 2023 seven individuals were captured from Seven Creeks. The fish were fin clipped for genetic analysis, PITT tagged for recapture identification (for future surveys) and successfully translocated to King Parrot Creek. Translocation actions are timed to maximise periods when waterways support good numbers of healthy juvenile fish (like the present) rather than waiting for low flow events when fish numbers are low, fish condition is poor and populations are at risk.



Photo 3. Macquarie perch receiving PITT tag prior to translocation from Seven Creeks to King Parrot Creek.

