

# Seven Creeks Fish Survey 2019



## Key points

- Current low flows combined with the cease to flow event in 2015/2016 are having negative impacts on Trout cod and Macquarie perch numbers.
- All fish captured were in good condition despite the low flows.
- Redfin and carp removal in 2018 was effective in reducing their numbers.

## Survey sites

Thirty sites were surveyed during late February and early March 2019. This included nine sites downstream of Galls Gap Road Bridge, including two that had instream habitat improvement works completed in 2018. Nineteen sites within the long-term monitoring reach between Gooram Falls and Galls Gap Road were monitored as well as two sites above Gooram Falls (Figure 1).

All fish species captured were measured and weighed. All fish were released at site of capture (except for carp and redfin). A small fin clip was obtained from 30 Macquarie perch and Trout cod of various sizes for future genetic analysis.



Figure 1. Map of fish survey sites on the Seven Creeks, February/March 2019

The Seven Creeks systems has experienced extremely low flows since spring 2018 with water levels the lowest since the cease-to-flow event in late 2015. Fortunately the creek continued to maintain flows through critical refuge habitats between Polly McQuinn's and Galls Gap Road.

## Results

A total of 401 fish and 29 yabbies, representing six native and four introduced species, were captured during the surveys (Table 1). Native fish accounted for 85% of the total catch.

Table 1. Fish and fauna capture 2019

2019 Common Name	Galls Gap Rd to Gooram Falls - Long term monitoring reach	Below Galls Gap Road Bridge - 1 km - 9 sites	Above Gooram Falls (2 sites)	Total
Trout cod	46	2	19	67
Macquarie perch	49	8	28	85
River blackfish	0	1	112	113
Two-spined blackfish	0	1	3	4
Mountain galaxid	52	15	0	67
Australian Smelt	1	4	0	5
Carp gudgeon	0	0	0	0
Southern pygmy perch	0	0	0	0
Common yabby	24	2	3	29
Freshwater crayfish	0	0	0	0
Common long-neck turtle	0	0	0	0
Carp*	18	4	0	22
Goldfish*	0	0	0	0
Redfin*	9	10	0	19
Brown trout*	0	0	1	1
Mosquitofish*	16	2	0	18
Total	215	49	166	430
*exotic species				

In the long term monitoring reach (Galls Gap Road to Gooram Falls), Trout cod (46) and Macquarie perch (49) continue to be the most abundant native species captured. However, the abundance of both species from this reach has decreased by more than 30% from the numbers captured in 2018 with the number of fish captured the lowest since surveys were undertaken in 2012 (Figure 2).

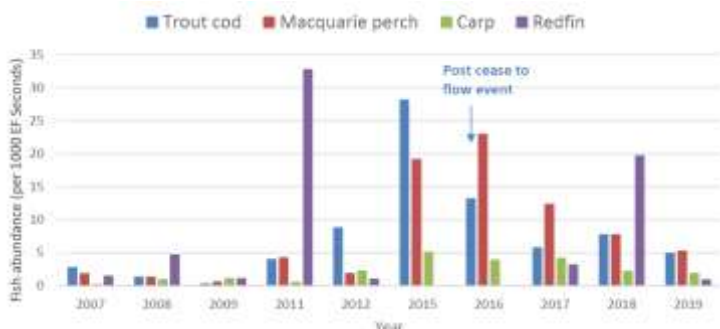


Figure 2. The standardised abundance of Trout cod, Macquarie perch, carp & redfin in Seven Creeks at the long-term monitoring site (Galls Gap Rd to Gooram Falls) between 2007 and 2019. Note: The standardised abundance accounts for fishing effort so that direct comparisons can be made between years

The size range of Trout cod captured in this reach was 69mm-550 mm. A small number of young-of-year fish were also captured, indicating breeding success in 2016, 2017 and 2018, although it is not known whether Trout cod are breeding in this section or above Gooram Falls. This will be investigated using the genetic material that has been collected in recent years.

The size range of Macquarie perch was 148mm-380mm. No young-of-year fish were detected; however, strong

recruitment was observed from the two sites above Gooram Falls

Immediately below Galls Gap Road instream habitat improvements works were completed in autumn 2018. This site has also recently been fenced to exclude stock and revegetated. One Macquarie perch was captured using the new structures. Many of the instream structures were out of the main channel due to the extremely low flows at the time of the survey.



Figure 3. Instream Habitat downstream of Galls Gap Road

This year two sites were surveyed above Gooram Falls. Despite evidence of recruitment by the presence of young-of-year Trout cod at the Watchbox Creek junction, their overall abundance continues to decline with 19 captured this year compared to 35 in 2018. This decrease could be a result of the cease to flow event in 2015/2016 in conjunction with the current low flow conditions. At this site the abundance of Macquarie perch has increased with 20 captured this year and nine last year with good levels of recruitment observed. The most upstream site surveyed (Site B) had not been surveyed since 2015. River blackfish were recorded in high numbers (112) compared to 23 individuals in 2015. This increase includes a high proportion of young-of-year fish. The absence of redfin from this site might be the reason for the healthy population of river blackfish.

A source population of redfin exists in Polly McQuinn's Reservoir and remains an ongoing threat to the native fish populations downstream. Targeted redfin and carp removal during autumn and spring in 2018 has been extremely effective with only nine redfin captured in the section below Gooram Falls compared to 235 in 2018.

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