

Native Fish Report Card

Wimmera River 2023

Wimmera Region



SITES: 8

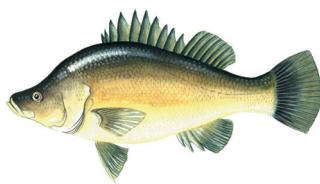
ELECTROFISHING

Fish found in the Wimmera River in our 2023 surveys



Target Species

✓ recorded in 2023



✓ **Golden Perch**

Macquaria ambigua



✓ **Freshwater Catfish**

Tandanus tandanus



Non-target species

✓ recorded since 2017*

Large-bodied native species

✓ Silver Perch

Small-bodied native species

- ✓ Australian Smelt
- ✓ Common Galaxias
- ✓ Carp Gudgeon
- ✓ Flatheaded Gudgeon

Exotic species

- ✓ Common Carp
- ✓ Eastern Gambusia
- ✓ Goldfish
- ✓ Redfin
- ✓ Roach

* These non-target species were incidentally captured during NFRC surveys since 2017 but not measured as for target species.

Fish community

The NFRC Program began in 2017, with a focus on targeting the monitoring of population dynamics of key iconic fish species that have high recreational and/or conservation values, in large rivers across Victoria. In the Wimmera River, the target species are Freshwater Catfish and Golden Perch. Surveys occur in February/March each year, at eight sites from Gross Bridge at Drung Drung to just upstream of Lake Hindmarsh, Jeparit. The equipment and habitats surveyed are focused on these species, which are measured to determine population structures. Other fish species that are incidentally captured are recorded, but not measured to determine their population structures.

Summary of key health indicators for target species in 2023

Species	Key Health Indicators		
	Recent recruitment	Multiple size classes	Mature fish present
Golden Perch	Yes	Yes	Yes
Freshwater Catfish*	-	-	-

Recent recruitment means young-of-year fish

** - cannot be determined due to low abundances*

Both Freshwater Catfish and Golden Perch are considered translocated populations in the Wimmera River.

Non-target species

The non-target fish species that have been incidentally recorded in the Wimmera River during NFRC surveys since 2017 are:

Large-bodied native species

Other large-bodied native species recorded in fish surveys are Murray Cod and Silver Perch. Both Murray Cod and Silver Perch are considered a translocated species in the Wimmera River. Small numbers (5,000–15,000) of Murray cod were stocked annually between 1997 and 2004 and 10,000 in 2022 and 10,000 in February 2023. Silver Perch have been stocked annually since 1997 with numbers stocked increasing recently from less than 20,000 pre 2020 to 50,000 in 2020 and 2021 and 100,000 in 2022 and 161,000 in March 2023.

Small-bodied native species

Some of the small-bodied species recorded within the Wimmera River include Australian Smelt and Flatheaded Gudgeon. Carp Gudgeon are a lowland species and are more common in slower flowing habitats, often hard to detect via boat electrofishing. The Common Galaxias is considered a translocated species and is likely to have entered the system via water transfers from the Glenelg River system.

Exotic fish species

Common Carp, Eastern Gambusia, Goldfish and Redfin are widely distributed across sampling sites, and have been detected in all sampling years. Roach were detected in 2018 and this is the first confirmed record of this species in the Wimmera River system.

Other native fish species known from the Wimmera River

Some fish species known to occur in the Wimmera River have never been recorded during NFRC surveys. For example, no Obscure Galaxias, River Blackfish and Southern Pygmy Perch have been detected in the surveys. Southern Pygmy Perch are more common in offstream habitats such as billabongs, wetlands and lagoons. Southern Pygmy Perch and River Blackfish are still present in the Wimmera River system upstream of the areas where NFRC surveys occur. Obscure Galaxias are difficult to detect using the NFRC sampling methods.

Other notable species

Surveys have also recorded Yabbies and Long-necked Turtles.

Environmental and Management Context

Environment

Low flow conditions were present in all seven sampling seasons.

River rehabilitation efforts in the Wimmera River

Many rehabilitation actions have occurred, and are underway, to improve the health of the Wimmera River and its fish community.

The WCMA collaborated with the Arthur Rylah Institute to produce the 2022 Wimmera Native Fish Management Plan. The plan's principal objectives are to guide strategic management, environmental flow regimes, cost-effective investment and recovery of native fish communities in the region. The overarching vision of the plan is that "The waterways of the Wimmera River catchment have abundant and diverse native fish populations than enhance the region's environmental, cultural and socio-economic values."

Water in the Wimmera catchment after extensive 2022 flows has provided opportunities to progress implementation of this plan. Options for enhanced management of native fish in the Wimmera system are being investigated.

A range of activities to improve river and fish health are also informed by the Wimmera Waterway Strategy 2014-2022. These include actions to improve water quality, manage erosion and sedimentation, improve riparian habitats through revegetation, weed control and fencing of riparian areas, installation of fish habitat and angler access platforms, allocations of water for the environment, fish stockings and control of Carp.

Some monitoring of the fish community occurs including as part of the Victorian Environmental Flows Monitoring and Assessment Program (VEFMAP). The [Wimmera Catchment Management Authority](#), DEECA and the [Victorian Fisheries Authority](#) support rehabilitation and management of the Wimmera River and its fish community.

The NFRC program, and related monitoring initiatives, provide improved understanding of the structure of fish communities and how rivers can be best managed.



Figure 1. Map showing the section of Wimmera River where NFRC sampling occurs.



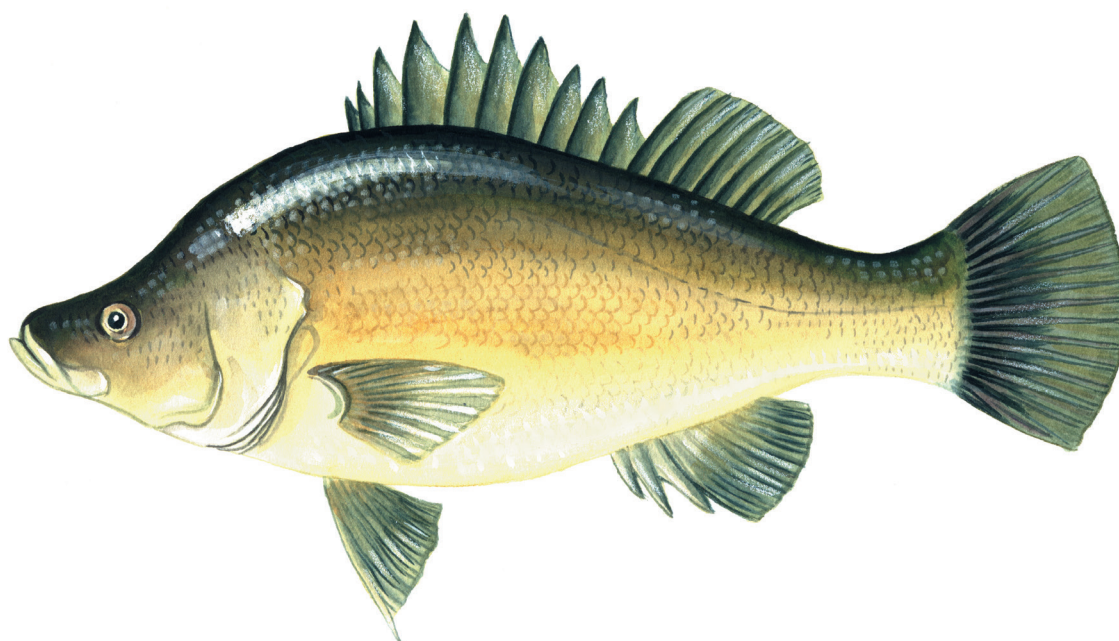
Figure 2. A Golden Perch



Figure 3. A Freshwater Catfish

Golden Perch

Macquaria ambigua



Key Health Indicators

- ✓ Recent recruitment
- ✓ Multiple size classes
- ✓ Mature fish present

Monitoring Results

Total number of fish caught	49
Fish per 1km of waterway	4.46
Largest fish by length (cm)	50.9
Largest fish by weight (kg)	2.31
% of the catch that is legal size	91.8

WIMMERA RIVER

RECREATIONAL SPECIES

All Golden Perch (*Macquaria ambigua*) in the Wimmera River are a result of stockings¹. Abundances of Golden Perch have been variable within the Wimmera system, with the lowest abundances recorded in 2020 (Figure 4). Since 2020, abundances have increased each year with the highest abundances detected in 2023 (Figure 5). The sampling methodology included fyke nets and electrofishing in 2017-19, but electrofishing only from 2020-23. Recruits were detected in 2018 and 2019 (Figure 4) via fyke netting and by electrofishing in 2022 and 2023. Recruits of this species are difficult to catch using electrofishing sampling methods and detections via electrofishing in 2022 and 2023 may indicate higher survival of stocking in those years. Juveniles and adults have been recorded in all seven sampling years, though the population is dominated by adult fish. A higher proportion of juveniles were detected in 2021 sampling (Figure 4). Although recruits and juveniles were detected in 2023, their abundances were low (Figure 5).

Stocking

Eighty thousand Golden Perch were stocked in 2016; 110,000 in 2017; 150,000 in 2019; 80,000 in 2020; 100,000 in 2021 and 167,000 in 2022 and 170,000 in March 2023.

¹ Trueman, W. T. (2012) True tales of the Trout Cod. River histories of the Murray-Darling Basin. Chapter 22 - Wimmera and Avoca river catchments. MDBA Publication (07/12).

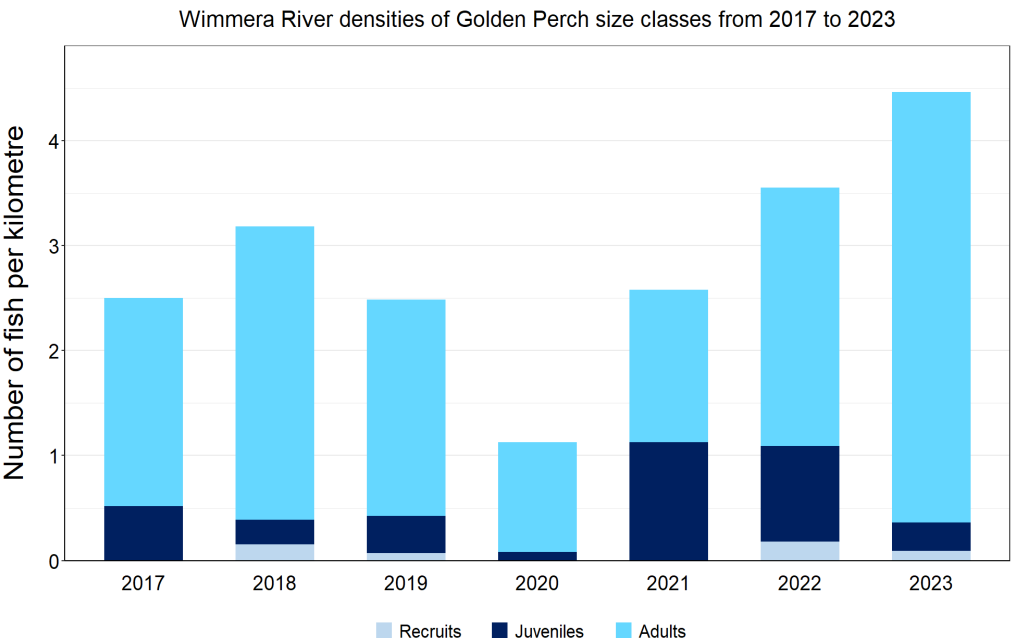


Figure 4. The densities of recruits, juveniles and adult Golden Perch for NFRC surveys in the Wimmera River from 2017 to 2023

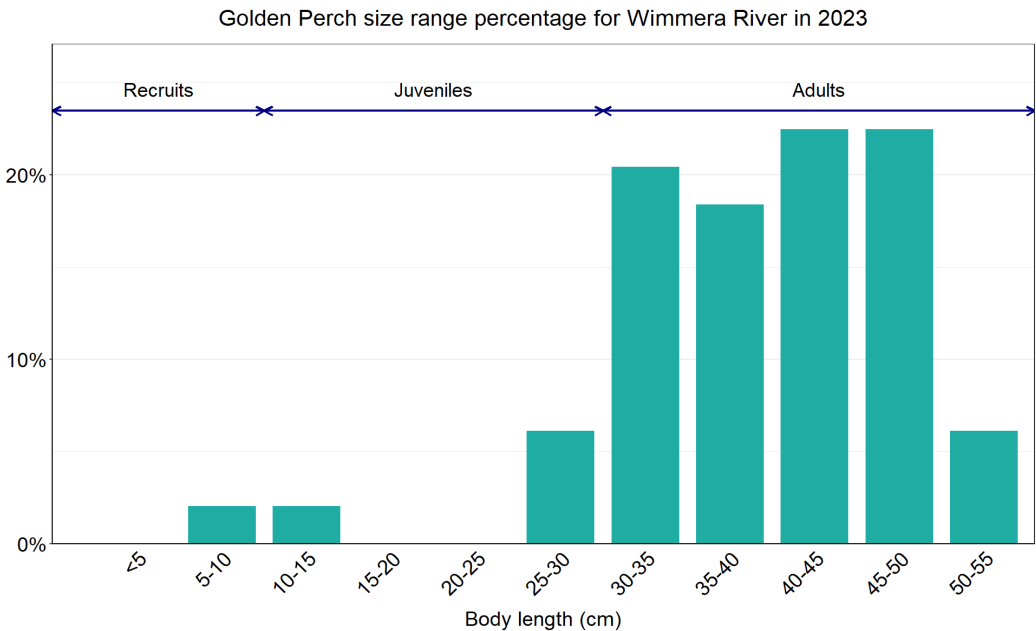
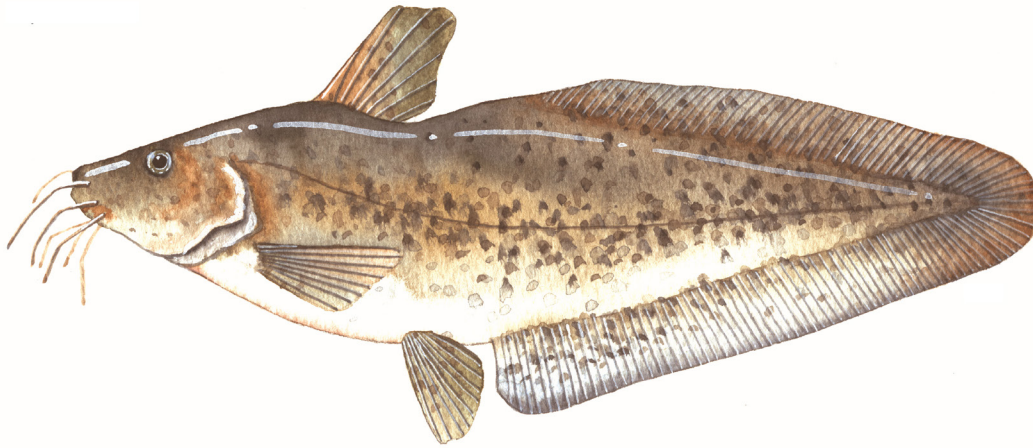


Figure 5. The size range percentage of Golden Perch measured from the Wimmera River during NFRC surveys in 2023

Freshwater Catfish

Tandanus tandanus



Key Health Indicators

- Cannot be determined
- Cannot be determined
- Cannot be determined

Monitoring Results

Total number of fish caught	4
Fish per 1km of waterway	0.36
Largest fish by length (cm)	45.4
Largest fish by weight (kg)	0.96
% of the catch that is legal size	100

WIMMERA RIVER

RECREATIONAL SPECIES

The NFRC does not expect to capture enough Freshwater Catfish (*Tandanus tandanus*) to measure key health indicators. However, collecting data for translocated species including Freshwater Catfish allows a greater understanding of the current status of the populations providing essential information to the management on this species.

Although low numbers of Freshwater Catfish were caught in all seven years of sampling, there has been a mix of recruits (2017-19), juveniles (2017 and 2021) and adults (2018-23) (Figure 6). In 2023, the second highest abundances were detected (Figure 6), though all were adults (Figure 6; Figure 7).

The sampling methods included fyke nets and electrofishing in 2017-19, but electrofishing only from 2020-23. Recruits of this species are difficult to catch using electrofishing sampling methods with recruits primarily detected via fyke netting. Only a single recruit was detected via electrofishing in 2019.

Stocking

No stocking has occurred.

Freshwater Catfish

Tandanus tandanus

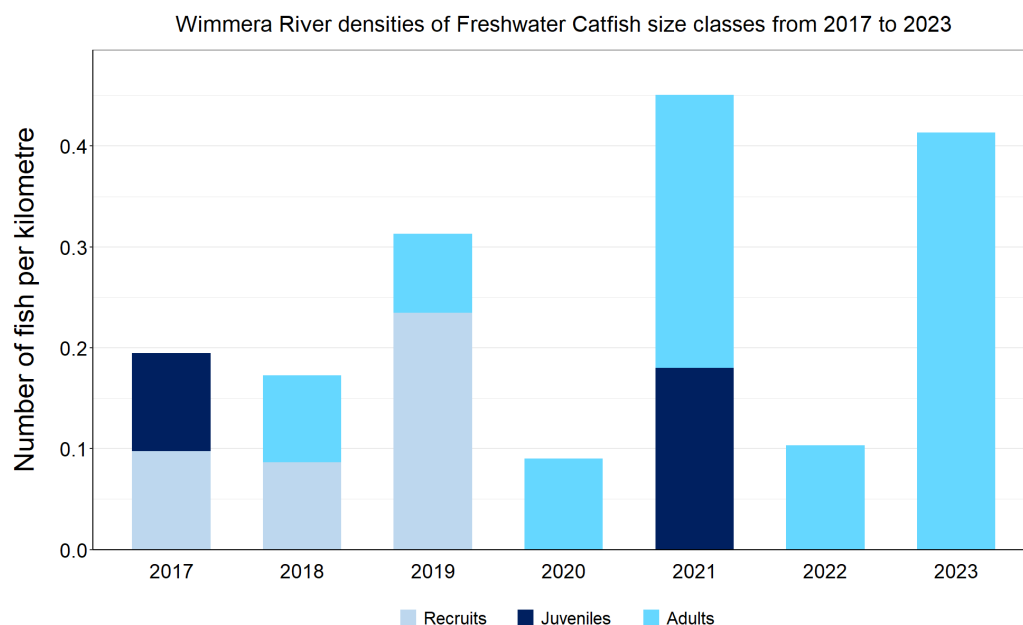


Figure 6. The densities of recruits, juveniles and adult Freshwater Catfish for NFRC surveys in the Wimmera River from 2017 to 2023

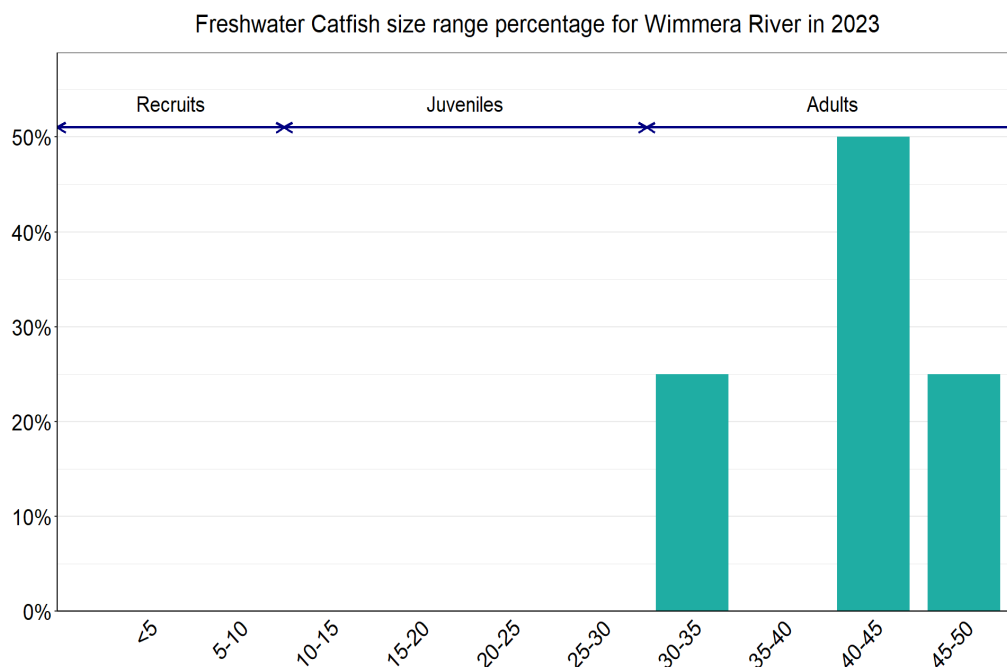


Figure 7. The size range percentage of Freshwater Catfish in the Wimmera River during NFRC surveys in 2023



We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it.

We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

DEECA is committed to genuinely partnering with Victorian Traditional Owners and Victoria's Aboriginal community to progress their aspirations.



© The State of Victoria Department of Energy, Environment and Climate Action 2023. This work is licensed under a Creative Commons Attribution 4.0 International licence. To view a copy of this licence, visit creativecommons.org/licenses/by/4.0/

ISSN 2981-9091 Online (pdf/word)