



Waterwatch & EstuaryWatch
Citizen science in
Victoria's waterways
Goulburn Broken

Regional Report

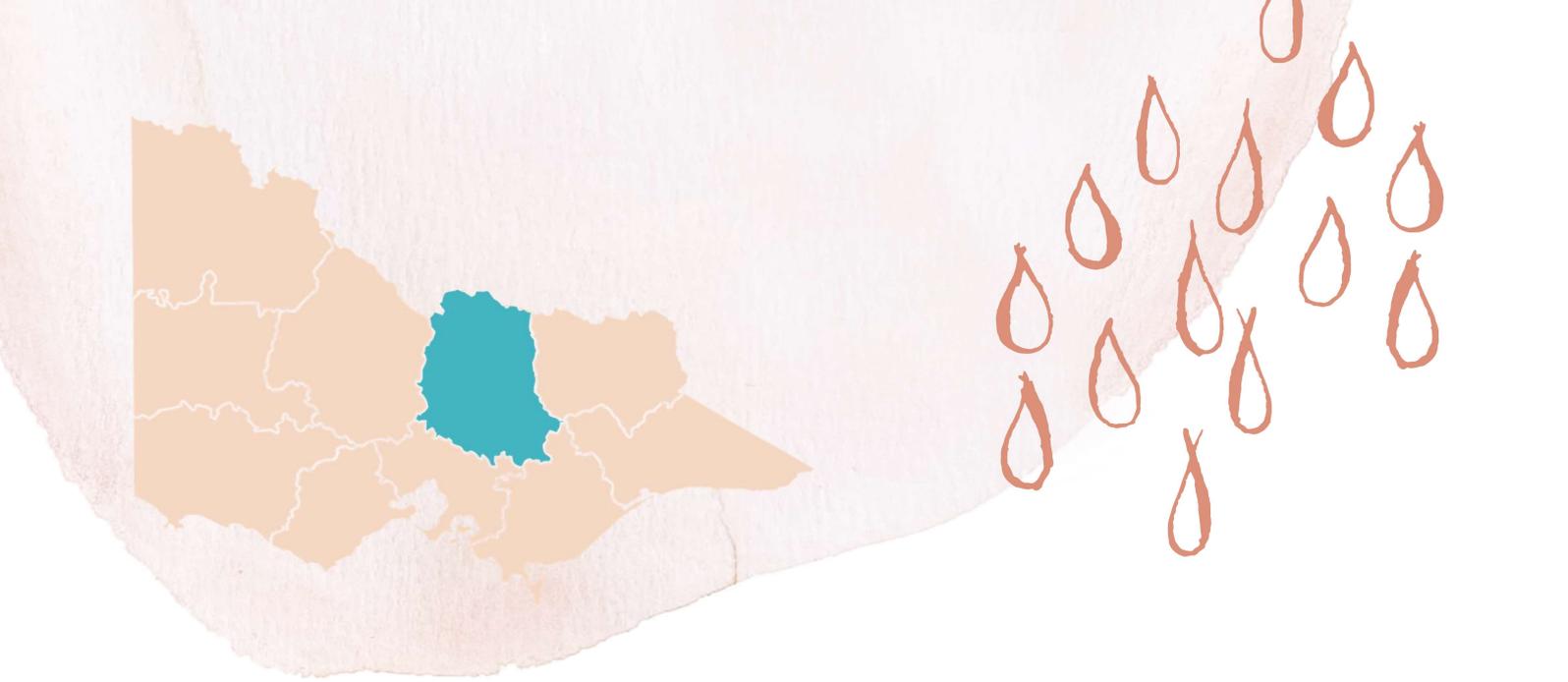
2019-2020



Environment,
Land, Water
and Planning



**GOULBURN
BROKEN**
CATCHMENT
MANAGEMENT
AUTHORITY



Victoria sustains a vibrant history of community-based environmental monitoring and citizen science programs, including the Waterwatch and EstuaryWatch programs. These programs are instrumental in informing waterway management decisions while strengthening community engagement and fostering environmental stewardship and advocacy. Catchment management authorities, water authorities, local government and other delivery partners play a crucial role in facilitating the programs.

Through the EstuaryWatch and Waterwatch programs, citizen scientists are supported and encouraged to become actively involved in local waterway monitoring and on-ground activities. Citizen scientists involved in the 2019-2020 programs contributed a total of **232,580** hours to care for our waterways, equivalent to 31,011 volunteer days. This contribution provides an economic value of the 2019-2020 volunteer effort of **\$9,707,889**. For more information, see the Waterwatch & EstuaryWatch Citizen science in Victoria's waterways Annual Achievements Report 2019-2020.

Aboriginal Acknowledgement:

EstuaryWatch and Waterwatch proudly acknowledge Victoria's Aboriginal community and their rich culture and pays respect to their Elders past, present and emerging. We acknowledge Aboriginal people as Australia's first peoples and as the Traditional Owners and custodians of the land and water on which we rely. We recognise and value the ongoing contribution of Aboriginal people and communities to Victorian life and how this enriches us. We embrace the spirit of reconciliation, working towards the equality of outcomes and ensuring an equal voice.

If you are interested in participating in citizen science in your region, please contact Goulburn Broken CMA on (03) 5822 7700 or visit <https://www.gbcm.vic.gov.au/>.

Regional Stats



186

Event
Participants



1

Active Groups



177

Active Sites



63

Active
Volunteers

Oxygen Monitoring to Save Endangered Perch

The Goulburn Broken catchment is home to seven of the 11 known populations of the endangered Macquarie Perch (*Macquaria australasica*) in Victoria. King Parrot Creek has one of the strongest populations of the fish.

For the third year running, King Parrot Creek, below the township of Strath Creek, stopped flowing during summer. As the frequency, magnitude and duration of these cease-to-flow events becomes more evident, the integration of the Goulburn Broken Waterwatch program has become vital in collecting data and monitoring dissolved oxygen (DO) levels in isolated pools along King Parrot Creek.

When waterways cease to flow, DO can rapidly deteriorate and lead to fish deaths. Algal growth in the warmer waters is another consequence of cease-to-flow events and can further deplete DO levels. Therefore, monitoring the creek's DO levels has become crucial. If DO levels drop below 3 mg/L further action would be required, including possible translocation of part of the fish population to more secure refuge pools within the creek for safekeeping.

The ability to draw on local knowledge and work collaboratively with a community demonstrates the importance of the Waterwatch program. Once again, Goulburn Broken CMA rallied their local King Parrot Creek Waterwatch monitors to help monitor DO levels in several refuge pools.

Volunteers visited the creek two or three times a week to test the pools' oxygen levels. Their help in this project was critical to keeping an eye on the health and resilience of this important King Parrot Creek Macquarie perch population.

Fortunately, the Goulburn Broken region received some vital summer rains and the Macquarie perch made it through the long hot summer. Due to the success of the King Parrot Creek monitoring, the Goulburn Broken CMA is looking to widen the program to other areas of the catchment to ensure all refuge pools are monitored.

Committed Waterwatch volunteers, David Wakefield and Laurie McMillan, sadly passed away in 2020. We thank them for their immense contribution to the Waterwatch program over their 25 years of water quality monitoring in the Goulburn Broken region.

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*Waterwatch volunteer, David Wakefield, testing DO levels along the King Parrot Creek over summer.
Credit GBCMA.*

Macroinvertebrates, Wetlands and Citizen Science!

A small group of eager volunteers arrived armed with gumboots and smartphones for our 2019 National Waterbug Blitz training day at the Yea River Wetlands.

Guided by freshwater ecologist, John Gooderham, volunteers were taken through sampling techniques, bug identification, and how to use the Waterbug App to replicate this information at their own local waterways.

There were many possible sample sites in the area, including the Yea River, but for ease of access, the wetland was chosen. Volunteers enjoyed taking samples among

the ribbon weeds, fallen timber and deeper pools.

Volunteers were also enthusiastic and willing to learn about the importance of macroinvertebrate populations in a waterway and wetland system. And while the group wasn't lucky enough to come across the endangered Ancient Greenling Damselfly (*Hemiphysalia mirabilis*), it was great to learn all about them!

Participants had the opportunity to identify over 15 different species of macroinvertebrates, using the app that easily takes the user through an identification key. The Goulburn Broken Waterwatch program is looking forward to offering more of these days in the future for more of our citizen scientists to attend.

"It was a great day, and I can't wait to see what macroinvertebrates I can find in my local creek."

John,
volunteer, Kilmore Creek.



Volunteers practicing their sampling techniques in the Yea Wetlands. Credit GBCMA.