North Central Waterwatch and the Native Fish Recovery Plan are working towards increasing native fish populations and ecological health of the region's waterways. The Victorian Government is supporting community partnerships over the next four years through Waterwatch and other citizen science initiatives to address local waterway priorities. The priorities are being addressed as part of the Victorian Government's \$222 million investment over the next four years to improve catchment and waterway health across regional Victoria. This investment is a key component of Water for Victoria - the government's plan for management of our water resources now and into the future.

The Results

The results in this report show that waterways in the NFRP project area are showing some improvements through an increased diversity and a rise in pollution sensitive macroinvertebrate (waterbug) scores, however, there is still much to be done. Through the NFRP project the North Central CMA will continue to deliver riparian and instream works to improve ecological condition of target waterways.

Citizen Scientists are playing an important role in monitoring waterways across the North Central CMA region. The North Central CMA is committed to supporting citizen science programs that enable communities to take action regarding the health of the region's waterways and to share knowledge. Citizen scientists are thecustodians of the environment and make a real difference to decisions being made about natural resource management.

"I knew the data we were collecting was to help the Native Fish Recovery project, able to understand each of the systems

How to get involved

To get involved in the RiverScan program your local Waterwatch Coordinator at the North Central **Catchment Management Authority**

- ĭ Via post: PO Box 18, Huntly VIC 3551
- ♥ Main Office: 628–634 Midland Hwv Huntly Victoria 3551

ek near Koondrook Tra

- Phone: 03 5448 7124
- Or follow us on:

Acknowledgments:

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RiverScan **Annual River Health Snapshot Report 2017**

North Central Waterwatch and the Native Fish Recovery Plan have again teamed up in 2017 to work with RiverScan volunteers to monitor waterway health and to support the recovery of native fish populations in north central Victoria.

In 2016, North Central Waterwatch and the Native Fish Recovery Plan (NFRP) developed a citizen science program called RiverScan, which saw North Central CMA staff and scientists work with 20 local community volunteers to monitor waterway health across four key waterways in the NFRP project area. The results were used to assess the ecological health of waterways and to collect baseline information to assist with the NFRP's implementation.

volunteers, or citizen scientists, to undertake monthly water quality monitor at 13 sites. A further 17 volunteers collected, identified, and assessed macroinvertebrate samples from 22 sites in total. Water quality and macroinvertebrate data collected by RiverScan volunteers will be used to track changes in ecological condition over time.

Through the RiverScan program, citizen scientists will continue to play an important role in monitoring changes in ecological health of waterways as a result of the implementation of the NFRP. This monitoring will include monthly water quality testing to understand pH levels, electrical conductivity, reactive

Acknowledgment of Country

The North Central Catchment Management Authority (CMA) acknowledges Aboriginal Traditional culture and spiritual connection to Country. We also recognise and acknowledge the contribution and interest of

"Water is the

lifeblood of the people of the land"

Traditional Owner Wamba Wamba

Interpreting the results

The results in this report are based on the analysis of macroinvertebrate monitoring data collected in spring 2017. The report assesses the ecological condition of four main waterways in the NFRP project area; Loddon River, Box-Pyramid Creek, **Gunbower Creek and Little Murray River**.

Agreed Level Taxonomy (ALT) referenc condition values are calculated using the Environment Protection Authority (EPA)

are based on biological characteristics Western Plains Bioregion, a region characterised by low elevation and slow flowing streams associated with floodp

Poor: Does not meet

ALT objectives for a

key processes are not



ALT objectives, meets the following targets

TAXA richness PET index ALT signal

↑ = increase compared 2016, ↓ = decrease compared 2016, - = no change



Little Murray River

The Little Murray River is generally in moderate to poor ecological condition. While signal scores meet the objectives, taxa richness and PET are poor. This may be a result of highly altered flow regimes and degraded aquatic habitat. Overall, the ecological health of Little Murray River has not significantly changed since 2016.

What's being done? The project is working towards improving instream habitat by installing over 40 instream woody habitat complexes in the Little Murray River. A Flows Operating Plan for the Little Murray River commenced at the end of 2017, which aims to improve river health, aquatic habitat and opportunities for fish spawning and movement. Two vertical slot fishways have also been installed on the Little Murray Weir and Fish Point Weir, which are now operational. Fencing out stock and revegetating stream banks is a focus for the Little Murray river going forward. Citizen Scientist: Rob Loats



a moderate to poor condition with small improvements observed at Twelve Mile Creek @ Canary Island Leaghur Road and Loddon River @ Old Kerang Road. It is anticipated that ecosystem health recovery in the lower Loddon River will be slow due to the highly disturbed nature of this system, historic alteration of flows and siltation of instream habitats.

What's being done? Ten fish havens (instream habitat) were installed below Kerang Weir in September 2017. Baffles and stills in Kerang fishway have been modified to enable passage of small-bodied fish, and an attraction flow was delivered through the system in April 2017. These works have resulted in golden and silver perch moving upstream through Kerang fishway. 11.2 km of fencing has been installed to protect riparian vegetation. Future project works include the installation of 15 woody habitat complexes in lower Loddon River in 2018.

Citizen Scientists: Trevor Wilkinson, Brian Walton and Bill Ricketts



What's being done? The Box Creek fish lock was commissioned by GMW in 2016 and allows large numbers of fish to move from the lower Loddon River to Kow Swamp. The NFRP project has installed 2.2 km of streamside fencing on Box-Pyramid Creek in 2017 and will continue to improve native fish populations and the

Box–Pyramid Creek

Overall, Box-Pyramid Creek is in moderate condition. There has been significant improvement in ecological condition since 2016 reflected by increases in all macroinvertebrate indices. The increases may be in response to the delivery of water for the environment and the installation of instream woody habitat in early 2017.

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