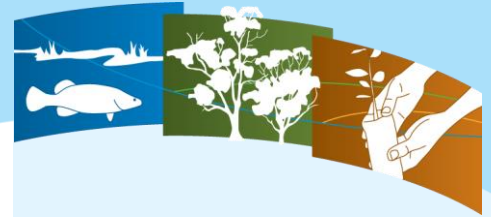


NEW FISHWAY FOR ECHUCA WEIR

MARCH 2014



INTRODUCTION

The Echuca Weir on the Campaspe River is being modified to improve fish passage.

The works are being carried out by the North Central Catchment Management Authority (CMA) in partnership with Goulburn-Murray Water (G-MW).

The Echuca Weir was initially constructed in the 1960s as a stream gauging station that required a continuous deep pool of water. Through fish monitoring we now know that the weir inhibits the movement of fish through the area (known as fish passage), especially during low water events.

Restricting fish movement can effectively stop many native fish species from breeding and repopulating waterways by restricting their ability to access breeding partners and spawning grounds. Barriers to fish movement result in long-term flow on effects to the size and sustainability of native fish populations. A healthy native fish population is desirable for both ecological and recreational benefits.

WHAT IS FISH PASSAGE?

Fish passage along waterways is critical to the survival of Australian native fish. Species of both fresh and saltwater fish move within waters at different times to access food and shelter, to avoid predators, and to seek out mates to breed and reproduce. Of the 83 species of freshwater fish in south-eastern Australia, half migrate at least once as part of their life cycle.

Three notable long distance swimmers are the Silver Perch (570 km), Murray Cod (1,000 km) and the Golden Perch which has been recorded swimming a staggering 2,300 km.

In December 2006, the Arthur Rylah Institute for Environmental Research undertook an assessment of barriers to fish movement along the Campaspe River. The Echuca Weir was identified as the highest priority for modification or removal in the Campaspe River.

The structure forms a barrier and its modification will open up 27 km of river for upstream movement of native migratory fish (Golden Perch, Silver Perch and Murray Cod) from the Murray River to the Campaspe Siphon near Rochester.

FISH FLOW SUCCESS IN GUNBOWER CREEK

Water flow can be managed to cue fish movement. A new environmental watering regime is proving beneficial to large-bodied fish in the Gunbower Creek.

Environmental flows targeting breeding of large-bodied fish, such as Murray Cod and Golden Perch, have been in use since September 2013. The delivery of flows is compatible with the fish's breeding cycle.

Monitoring in November 2013 revealed young larvae less than seven days old downstream of Cohuna, confirming that fish are spawning in the Creek. Three weeks later another group of larvae of the same age was observed. This confirms at least two successful spawning events during the spring managed environmental flow event.

One successful Murray Cod spawning event produces thousands of fish, and despite high mortality of young fish, those that survive their first summer and winter have a good chance of surviving through to maturity.

Environmental flows will continue to be delivered through Gunbower Creek to provide the young fish with access to food resources and shelter from predation.



CURRENT WEIR



410 TONNES OF ROCK WILL BE USED TO CREATE A FISHWAY AT THE CURRENT WEIR SITE



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NEW FISHWAY FOR ECHUCA WEIR

WHAT WILL THE MODIFICATION WORK INVOLVE?

The current top of the structure (the cap) will be removed to improve fish passage.

In order to complete the works, a temporary coffer dam will be constructed upstream of the weir to hold back water whilst the works are occurring (approximately two weeks).

The coffer dam will be removed when works are completed and the material used to construct it will be reused to stabilise the river bed.

Some concrete from the footings of the original weir structure will remain in the bed and bank in order to ensure bank stability and to minimise soil disruption. The remnant footings from the weir structure will not be visible in the landscape.

Removal of the weir will benefit fish populations and the ecology of the river, and will also help to improve fish stocks for recreational fishing.

WHEN WILL THE MODIFICATION WORK OCCUR AND HOW LONG WILL IT TAKE?

Work will commence in late April 2014 and is expected to take approximately two weeks to complete, provided the weather conditions are favourable. Adverse weather conditions may delay the project.

The normal base flow for the Campaspe River in autumn is 20 ML/day. Water flow in the Campaspe River at the Echuca Weir will drop to 10 ML/day over the construction period.

WHY DID THE WORK NOT OCCUR WHEN FIRST PROPOSED IN 2012?

In 2012 the North Central CMA, in partnership with G-MW, proposed a modification to the Echuca Weir and consulted widely on the preferred option at the time. The preferred option for improving fish passage at that time involved removing the existing weir and dropping the sill about 60 centimetres.

Responding to community concern, particularly among those people living upstream within 4 km of the weir, the North Central CMA met with the G-MW construction team and fish ecologists to explore further options. The team looked for an option that would alleviate community concern and still meet the ecological objective of improving passage for native fish. The result is the new structure to replace the existing weir.

The new fishway at the Echuca Weir will be longer than the originally proposed structure however the weir pool level will not drop below the current level.

The new structure involves the use of a lot more rock than was proposed in 2012 and the new design will facilitate easier passage for native fish.

A small amount of on-site clay soil will be used to seal the fishway from the initial excavation. This may cause some short-term increased turbidity downstream of the weir.

HOW WILL THE MODIFICATION WORKS AFFECT LOCAL RESIDENTS?

There will be some disruptions to local residents and other users of the area, as the site will be cordoned off whilst the works are in progress.

Local residents will notice an increase in traffic over a short period as trucks deliver construction material to the site.

Once the coffer dam is removed, the water level upstream of the dam will drop back to the current level.

WILL DIVERTERS BE IMPACTED?

There will be some short-term impact on diverters during the construction period, however once completed the weir pool will return to its historic height.

WHO IS DOING THE MODIFICATION WORKS?

The North Central CMA is funding and managing the modification of the Echuca Weir. G-MW has been contracted to undertake the construction works.

FOR MORE INFORMATION

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