




October 2008



December 2015

These before and after photos of Big Bend in the Wimmera River show how environmental water releases since the Millennium Drought are helping keep the river healthy, even in dry conditions.

  
 Water efficiency savings from the Wimmera Mallee and Northern Mallee pipelines created environmental water.  
 Wimmera CMA works with the Victorian Environmental Water Holder (VEWH), GWMWater and local councils to deliver this water as part of the VEWH Seasonal Watering Plan 2015-16.  
 However, weather conditions ultimately dictate how much water is available

# Environmental Water Releases

## SUMMER UPDATE

### HOW WE KEEP TRACK OF RIVER HEALTH

One of the driest springs on record and four consecutive years of below average rain, mean waterways in the Wimmera are suffering. This summer will pose immense challenges for fish, plants, animals and communities who rely on a healthy river for their survival and wellbeing. We will face impacts such as blue green algal blooms created by poor water quality and waterways going dry.

### We have limited environmental water available and are managing it carefully to reduce impacts:

- Wimmera River - an environmental water release is planned in late summer to top up refuge pools (sections of a river deep enough to sustain life throughout a long dry) and improve water quality from Longerenong through to Dimboola
- Mid-MacKenzie River and Upper Burnt Creek - continuous low flows of up to 8 ML/day are planned to provide habitat for platypus and high value native fish
- Mt William Creek – watering of the refuge pool at Mokepilly is planned for early-mid 2016 depending on seasonal conditions



Above: Fish monitoring, Mt William Creek



Left: Southern Pygmy Perch



Above: EM survey, Jeparit



Above: Carp removed from the Wimmera River upstream of Horsham

### Annual fish surveys

Our latest surveys echo the experiences of local anglers that the river's fish population has bounced back successfully from the impacts of the Millennium Drought, largely thanks to environmental water.

These surveys also pick up the small-bodied species anglers don't catch like Australian Smelt and Flatheaded Gudgeons which are crucial parts of the river ecosystem. Small-bodied fish are a food source for angling species, as well as being effective mosquito controllers by eating their larvae.

### Fish breeding

Fish monitoring in Mt William Creek at Mokepilly in October showed that environmental watering in April resulted in a significant breeding event for Southern Pygmy Perch. These attractive native fish rely on aquatic vegetation to protect them from predators and give them somewhere to lay their eggs.

### Salinity

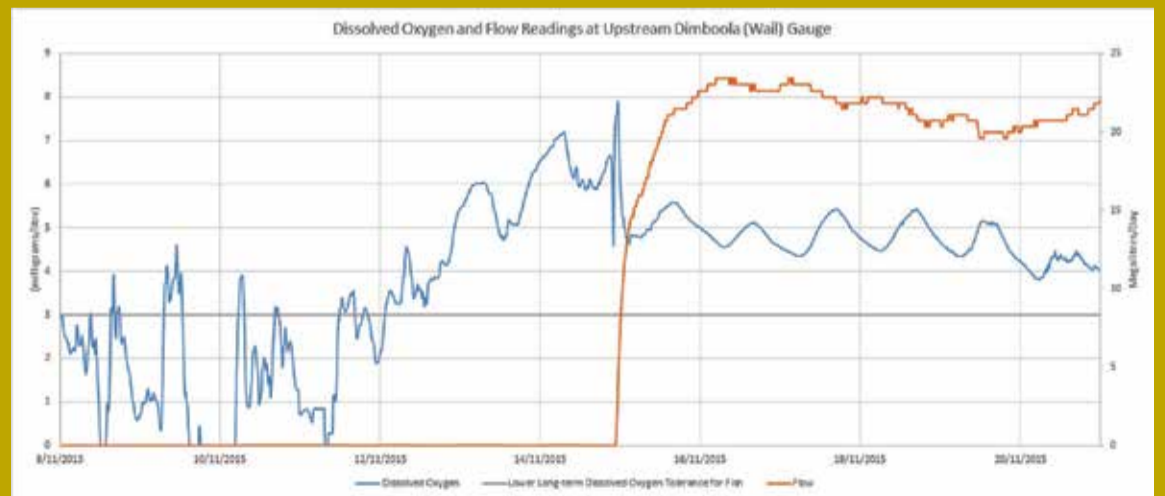
Dry conditions present opportunities to better understand the impacts of salinity on a river system. During the past few weeks CMA staff and experts have been out and about in the Wimmera River analysing locations and rates of salt entering the river.

### Carp

We are also using the latest eDNA technology to understand the behaviour of carp, a pest species, in response to flows and no flows. Carp cause significant damage to river systems and we are evaluating options to reduce their impact.

### Water quality

Our water quality monitoring gives us a constant flow of information. We have several sites, including one at Wail, which give us advance warning of water quality issues affecting the lower Wimmera River. For example, high salinity or low dissolved oxygen.



**POSITIVE IMPACTS OF DISSOLVED OXYGEN:** Very few fish survive exposure to levels of below 3 mg/L (grey line). When dissolved oxygen is low for prolonged periods, you see fish gasping at the surface due to the lack of oxygen, and fish kills can occur. The orange line demonstrates the impact of the environmental water arriving at the Wail Gauge on November 15.

